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Addresses

TO-DAY'S CRUSADE AGAINST CONSUMPTION.*

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PHILADELPHIA.

Prophylaxis in pulmonary tuberculosis, that is, its prevention, is of such general interest and of such vital importance that the presentation of this subject in a public address needs no apology. People everywhere are alive to the preventable character of this disease, and never before has the interest in this phase of the subject been more widespread.

Before taking up the subject proper of this paper, however, I wish to present some interesting figures from the United States Census Reports 11 and 12, and from certain German reports. In the year 1890, 102,-199 people died of consumption in the United States; a proportion of over 12,000 per 100,000 deaths. In 1900, 111,059 people died of consumption; a proportion of over 10,000 per 100,000 deaths. It will be seen that over a hundred thousand lives are lost a year through this dread disease; or, to put it a little differently, one death out of every ten is caused by consumption. In fact, more people die of consumption than of scarlet fever, measles, typhoid fever, diphtheria, whooping cough and influenza, all together. Fully 80 per cent. of the victims of tuberculosis are in the middle period of life, between the ages of 15 and 50. Let us make a very conservative estimate, which is not as fanciful as it may seem, of the actual loss in cash of this army of sick, incapacitated from earning their daily bread. Putting the average daily wage at 75 cents a day, the loss amounts to $67,000 a day; or reckoning the working year at 300 days, and estimating the individual incapacity as being for six months only, the loss amounts to $10,000,000 a year. When to this one adds the expenditure necessary for physicians, nursing, medicine and burial, the figures become stupendous.

Cornet of Berlin gives some interesting figures on tuberculosis for continental Europe, which it may interest you to hear. From 1875 to 1894 the deaths from tuberculosis in Prussia alone amounted to 1,669,587 persons, which is equivalent to the entire population of Philadelphia. The average is about 80,000 a year. In Austria, from 1881 to 1892, a period of eleven years, there were 1,059,300 deaths, or about 90,000 a year. These figures represent a mortality even greater than we have in this country.

Tuberculosis is more fatal to humanity than dysentery, cholera or the plague. The ravages of war are insignificant beside it. In the great Franco-Prussian war, according to Prussian statistics, the number of men killed and dying of wounds and disease amounted to 40,951. Twice as many die each year in Prussia of tuberculosis. In our own Civil War there were 70,293 lives lost in battle. This is only a little over half the number dying each year from tuberculosis in this country.

But monstrous as is this showing of the direct ravages of tuberculosis, it is not all nor even the worst half of the picture; for you must know that tuberculosis attacks every organ and tissue of the body and accordingly travels under many other names. For instance, it is called lupus when it attacks the skin; scrofula when it attacks the glands; curvature of the spine, or spinal caries, when it attacks the vertebræ; Pott's disease, when it attacks the hip; white swelling, when it attacks the joints; and so on indefinitely. Who, then, can measure the anguish, poverty, degradation and sin which it causes! Our insane hospitals and orphan asylums, our homes and hospitals for crippled children, our reformatories, prisons and penitentiaries are filled with the indirect results of tuberculosis (Flick).

With such facts and figures before us, there can be little need of discussing the advisability of employing measures to suppress this universal pest. That we should adopt all such measures as lie in our power is a self-evident fact. And when I add that we *can* safeguard against it, and that by certain simple measures we *can* cut down this awful mortality it becomes criminal negligence on our part to neglect them.

The general indications for prophylaxis or prevention in pulmonary tuberculosis may be classified as including two broad aims: first, to destroy the tubercle bacillus and prevent its spread in the dried state; and, second, when once it has gained entrance to the body, to eliminate it as quickly as possible, or inhibit its growth by means of the vital energies (Cornet).

Let us consider, first, the means at our disposal to annihilate the organism. The tubercle bacillus, which is the one and only cause of tuberculosis, is unable, except when cultivated artificially in the laboratory, to increase and multiply outside the body of either human beings or animals. This is partly because it requires high body temperatures, and partly because of its slow growth, as it is crowded out of existence by other micro-organisms which grow more rapidly and luxuriantly. Fresh air and sunlight destroy it. It, therefore, exists among us only from being present in (1) the secretions and excretions of tuberculous human beings, and (2) in the milk and meat of tuberculous animals. The breath of tuberculous patients does not contain the bacilli; it is sterile and harmless.

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The bacillus gains entrance to the human system, first, and most frequently, from tuberculous matter given off by consumptives after it has become dry and pulverized, and the bacilli, diffused in the air, are then either directly inhaled or taken into the gastro-intestinal tract; and, second, from the use of infected meat or milk. Tuberculosis is very rarely transmitted by heredity.

Infection from the use of tuberculous meat or milk is not likely to occur where there is careful inspection of dairies, slaughter houses and herds. It is also guarded against by cooking the food. The great omnipresent danger lies in the inhalation of tubercle bacilli as they float in the atmosphere of contaminated places, halls and rooms of dwelling houses, factories or other poorly ventilated buildings, which have become infected by expectoration of tuberculous material. Other excreta may contain tubercle bacilli. It may be given off from the drying of feces, of pus from areas of tuberculous suppuration, from particles thrown out in the act of coughing; but these are all negligible quantities compared with the all-important source of infection in dried sputum.

Before proceeding, however, with the prophylaxis of the individual, let us for a moment consider the interest of the state in tuberculosis. We have seen from the statistics which have already been given that this matter is of such vital interest and of such widespread importance that, without aid from state and municipal authorities, the profession, even seconded by an intelligent public, is powerless to stop the spread of this scourge. We, therefore, turn, as we have every right to do, to those bodies politic which assure to each and every one of us life, liberty and the pursuit of happiness. The only question to be asked is, How can the state help in this crusade? It can help in three most important and effective ways: (1) By establishing sanatoria for the segregation, treatment and employment of those cases which are too poor or ignorant to take care of themselves and in whose carelessness, squalor and filth lies the chief source of infection. (2) By rendering effective financial assistance to free, private or corporate sanatoria already in existence. (3) By requiring the registration of every case of tuberculosis within its confines.

The state sees and performs wisely its duties in protecting us from the spread of smallpox, scarlet fever, diphtheria, typhoid fever and other contagious diseases, the yearly ravages from which are not individually one-tenth of, and in the aggregate do not equal, the mortality of tuberculosis. Why, then, should it not in certain simple, timely and reasonable ways see its way clear to these more urgent measures. There should exist in all states adequate sanatoria accommodation for the tuberculous poor of the commonwealth. Whether this can best be done by free institutions founded and maintained by the state, or by free private institutions fostered by state aid, is an open matter of dispute. These free sanatoria should be placed in suitable localities in different sections of the state, and should, of course, be under expert medical and sanitary control. There are at present in Pennsylvania, counting city institutions as well as those in the country, at the most 1,000 free beds for consumptives. The present need is for at least five times that number.

One has only to turn to the records of existing sanatoria, of which the free hospital for poor consumptives at White Haven may be taken as a model type, to see the splendid results achieved. Both private and state aid should be freely given to such institutions; for their expenses are always very great. Their cottages and tents are always filled, and they have demonstrated that this is the best and most effective treatment we have to-day for a large class of cases.

In public or state sanatoria, did they but exist, or in free sanatoria supported by private charity, could they be enlarged and given increased means, the afflicted poor who infest our slums and die miserably by the hundreds could receive the care and treatment they require. What a gain to them! What a gain to humanity at large! It is these overcrowded lodging houses and tenements in the poorer sections of our cities, plague spots, which furnish the ever-present foci and source of the disease!

For tuberculosis is pre-eminently a house-bred disease. It is not contagious in the ordinary acceptance of that term. In the vast majority of instances it is contracted from living in a room or a house which has been previously contaminated or is being contaminated by the carelessness of a consumptive. It requires a prolonged exposure for a successful implantation or inoculation with the tubercle bacillus. There is little if any danger in transient association with consumptives, or transient exposure to contaminated places. Physicians are in little or no danger from their examination of and attendance on the tuberculous sick. You can not contract consumption from riding in a street car, nor even from sleeping a night or two in a berth on a railroad train or boat which has been previously occupied by a consumptive. All such ideas of the danger of consumption come of ignorance and exaggeration.

But it is the plague-invested areas of the slums which keep the disease continually alive; the filth and overcrowding, the squalor and starvation, which furnish the fertile soil for the disease. Many of you know, no doubt, the small tumbledown houses and the dirty tenements in which the really poor live; the cheerless, ill-ventilated rooms, the dark,narrow halls. There was a filthy, contaminated house, not unlike many others, which I happen to recall because it was so near the Phipps Institute. There were six or eight deaths a year from tuberculosis from this place alone. The average number of occupants to a room was four. I knew of two families of seven in two rooms, five of whom had consumption. How long would it take these five people, even if there were no other cases, to contaminate that whole house! The average length of residence in one place among the poor is about two or three months. How long would it take anyone coming into such quarters to contract the disease! Is it any wonder that with these ever-present foci of infection, tuberculosis numbers its victims by the tens of thousands, and that the ranks of this great army of death are always filled?

The period at which consumptives are most dangerous to their families and to the community is when they are far advanced in the disease and are very ill. Then it is that, while expectorating a great deal, they are too ill or careless to take the precaution of destroying their sputum and so guarding others from its dangers. It is especially at this time that they should be removed from their squalid surroundings and placed in city institutions. Sanatoria are necessarily limited to incipient or moderately advanced cases, which will get better in from three to six months, and they must be supplemented by city hospitals for advanced dying cases.

It is in this latter way that the wards of the Phipps Institute are doing such a great work, not only in ar-

resting the disease in apparently hopeless cases, but in taking these cases away from their filthy surroundings just at the time when they are most dangerous to others.

In this connection dispensaries for out-patients or ambulatory cases should also be mentioned. They, too, are most potent factors in the restriction of the disease, because, aside from the benefit patients receive from treatment in dispensaries (and this is very great), they are also taught how to take care of themselves and protect others from infection.

Finally, just a word about registration. It is absolutely essential for the authorities to know the location and distribution of these cases in order that they may carry out disinfectant measures where such are necessary. It is not with the idea of making outcasts of these afflicted poor, but rather with a view of preventing them from becoming such. These cases among the ignorant should be protected from the isolation and neglect to which an unreasonable fear of their condition often subjects them. Registration would not mean municipal interference with private rights or personal liberty, but would enable urgent measures to be taken to clean and disinfect the houses and localities in which the disease is thickest, and to educate the householders themselves as to the real source of the danger.

Let us now take up the question of private prophylaxis or prevention. The interest or duty of the individual in prophylaxis concerns us even more vitally than the duty of the state in this regard. It is here that each and every one of us has the opportunity, and our duty is plain, to help along this great crusade. The keynote of what I shall say in regard to individual prophylaxis lies in the fact that the tuberculous person is himself the origin and source of the danger, and that it is well within his power, by the exercise of a little care and a few simple rules of hygiene, which will in no way interfere with his comfort, to control absolutely the spread of the disease from himself (Cornet).

As I hinted above, the most important element in private prophylaxis is the absolute destruction of tuberculous sputum. It is absolutely essential that it should not become dry and pulverized, thus permitting the bacilli to be disseminated in the air. Tuberculous sputum is, as a rule, enveloped in a viscid bronchial mucous, which contains the bacilli in enormous numbers and retains them as long as it remains moist. When it dries, however, and becomes pulverized, as is apt to occur when it is expectorated on the floor or into handkerchiefs, or rags, millions and millions of bacilli, death lurking in their presence, are disseminated in the air. The danger from the drying of sputum is much more imminent in closed or poorly ventilated places. The bacilli may be directly inhaled as they float in the atmosphere of the infected room or house, or may settle in the dust to be later stirred up and inhaled or carried directly to the mouth by contaminated hands or food and so ingested into the stomach.

Is it possible to guard against this prolific source of infection? The answer is *yes*, and very simply and easily, viz., the absolute destruction of sputum. This can be accomplished just in one way, by the use of paper spitboxes and paper handkerchiefs. In this way, and only in this way, can the consumptive absolutely control the danger. When indoors, patients should without fail expectorate into these. For the street, they should carry paper handkerchiefs and a small paper bag, into which the former are placed when used, the whole being burned as soon as the house is reached. Subjects of this disease should absolutely avoid spitting into rags or ordinary handkerchiefs, as the sputum dries quickly, and this is not only a source of infection for others, but of reinfection for the patient himself. Inasmuch, too, as during the act of coughing, particles of sputum are thrown forcibly out, a paper handkerchief should always be held over the mouth when coughing.

The use of spittoons should be avoided, because absolute control of the sputum and its sure destruction is not possible under these circumstances. Spittoons lead to carelessness and are very difficult to disinfect. Unless the greatest care is used in burning the contents and the vessel is subsequently sterilized in boiling water, the spittoon is more apt to be a source of menace than of security. Another objection lies in the difficulty of expectorating precisely into a spittoon and not on to the rim or surrounding floor or carpet. One has only to note the condition of cuspidors in public places frequented by men to appreciate the significance of my remarks. Indeed, they are worse than useless and rather predispose to infection than protect against it.

The importance of destroying the sputum can not be exaggerated. Cornet says: "According to my experience, bacilli are found in the immediate environment of consumptives, only in case they make use of handkerchiefs or spit on the floor, and never under other conditions." This is an important statement when one considers that Cornet is one of the greatest authorities in Germany on tuberculosis and was the first to demonstrate the presence of tubercle bacilli in rooms and wards occupied by tuberculous patients. It might interest you to hear how he did this. He placed plates in the places which he had reason to believe were infected, and allowed the dust of the room or factory to settle on them. He then collected this dust and inoculated guinea-pigs with it, with the invariable result that from the dust of infected places the pigs developed tuberculosis and died.

A consumptive's sputum is not only dangerous to others, but to himself. By inhaling fresh tubercle bacilli or swallowing his sputum, fresh foci of infection are set up, on the one hand in the lungs, and on the other in the intestines. He can not be too careful on his own account, and it is a good plan for him to wash his mouth and hands thoroughly before taking food, in order that no stray particle of sputum may be carried into the stomach. On this point Cornet says: "The tuberculous person lives at the center, as it were, of the infectious circle which he himself creates, and so imperils himself more than any other. He really commits a slow suicide by carelessness."

Physicians should discourage the marriage of tuberculous persons. A wife, or child occupying the same room with a tuberculous husband or father, is almost sure to contract the disease. An individual, the subject of tuberculosis, should occupy a room alone.

Physicians and others should wash their hands thoroughly after examining or being about tuberculous patients. Nurses who have to do with these sick can not be too careful not to carry their hands to their lips. It is a good plan when in an infected room or house to breathe as much as possible through the nose.

The bedding, towels and clothing of tuberculous patients should be frequently changed, and when soiled put into boiling water or disinfected by live steam. The vessels of the toilet or table articles should be thoroughly disinfected in boiling water.

The use of disinfectants other than fire, boiling water and steam is unsatisfactory and incomplete. Powdered

lye may be used to put on sputum which has been expectorated on the floor. It does not destroy the bacillus, but dissolves and disintegrates the sputum mass and enables it to be taken up with soap and water. The best disinfectant for the hands is soap and water and a stiff scrubbing brush. In a general way it may be said that solutions of carbolic acid or corrosive sublimate are useless for the hands, as they are when applied directly to the sputum. They serve only to incase the bacillus in a firm albumin coagulum from which they eventually emerge on drying as lively as ever. Chlorinated lime and the milk of lime are useful to mix with contaminated excreta, and whitewash is a good disinfectant applied to the walls of a cellar. For the purpose of disinfecting rooms, however, the best agent is, first, thorough cleansing, followed by formaldehyd gas. Formaldehyd in solution, while inferior to lime, is also useful. We are thus reduced, briefly, to the following measures or solutions:

(a) General measures—fire, boiling water, steam, formaldehyd gas; (b) local measures, absolute cleanliness, soap and water, lye, chlorid and milk of lime and formalin.

Bedrooms and sitting rooms should be frequently aired and have all the sunlight possible admitted. They should not be dusted, but the walls and furniture should be wiped down moist. They should not have curtains at the windows, nor unnecessary hangings nor drapery of any kind. The floors should be bare or only covered by rugs, and the windows, except in very cold or wet weather, should be kept open both day and night. A room or house in which a consumptive has lived and died should be disinfected with as much care, according to established methods in such cases, as if he had died of smallpox or diphtheria.

Perhaps it would interest you to hear how we practice prophylaxis at the Phipps Institute. Each patient is given a sputum cup as soon as he enters the hospital and is instructed in the importance of its use. He is also carefully instructed in other details of personal cleanliness. The hospital building itself, floors, walls and stairways from garret to cellar are wiped down every morning with moist mops and cloths. Each bit of furniture and woodwork is treated in the same way, even the doorknobs are not forgotten. All bed linen, towels, wearing apparel after being used are put immediately into large bags and immersed in boiling water.

Not the least part of the prophylaxis relates to the out-patients to the daily clinics. At the first visit of each patient he is given a sputum cup and paper handkerchief and bags for the street. In his history he replies to the following questions: How many persons in the house? How many sleeping rooms? How many beds? Do you sleep alone? Where do you expectorate when home? When in the street? etc. Then he is carefully instructed as to personal cleanliness and the right manner of living.

Subsequently the home of the patient is visited by an inspectress from the institute, who examines into the conditions as they actually exist and makes a report. She reinstructs the patient and his family and posts the rules of the institute on the wall.

In regard to the second indication in prophylaxis as indicated above, i. e., to inhibit the growth and destroy the bacillus after it has gained entrance to the body, by means of stimulating the vital energies, or the natural immunity of the individual, we must here trespass a little on the domain of the cure or treatment. You must know that all animals, including man, enjoy a certain amount of natural immunity against tuberculosis; in other words, have a certain amount of natural resistance against its invasion. If this were not so, many more would have the disease than do, for there can be little doubt that the seed of infection is often sown when it does not thrive. This resistance to infection may be increased or diminished by the circumstances of the patient's life. For instance, confinement and overwork, mental worry or strain, loss of sleep and poor food, all contribute to reduce the natural resistance; while a healthy, out-of-door life, with plenty of fresh air and exercise, long hours of rest and good food, all tend to increase the natural resistance of the organism. It is by the application of this principle in the treatment of tuberculosis that we obtain such happy results to-day. The percentage of cures is much greater than it has ever been before.

Tuberculosis is not, as a rule, hereditary in the sense of being directly transmitted from parent to offspring. Rarely, however, it is congenital through the mother. But, on the contrary, the view held by Dr. Flick is that children of tuberculous parents when born after the parents, one or both, have had the disease, enjoy to a much higher degree this power of resisting the infection than do others. So firm a believer is Dr. Flick in this theory that he says he is always relieved to find such a family history in a patient. In other words, he thinks that you have inherited in your organism and blood a greater resistance if your father or mother or your grandfather or grandmother have had consumption before you. The reason why children of tuberculous parents so often develop the disease and die is that throughout their early childhood they are subject to such a constant source of infection in their homes.

You will reply that even when taken from home and the environment of their parents early and brought up elsewhere such children frequently die of consumption. This is true, but the answer is that they have been infected early, not with the disease itself, but with the cause of it, the tubercle bacillus; and have carried in their bodies for years, frequently in tuberculous retroperitoneal or bronchial lymph glands, the germ of the disease. This has only awaited a favorable opportunity to break forth and infect the lungs through the lymph channels or the blood. Such an opportunity is furnished by ill health, or a bad cold, an attack of the grippe or pneumonia, and eventually they perish.

RECAPITULATION.

Let me, then, briefly recapitulate and I am through. The most general and fatal disease of mankind is tuberculosis (consumption). One-tenth of all people fall victims to it. In America alone over 110,000 people die of it annually. The disease originates through the inspiration or ingestion of the germ of the disease, the tubercle bacillus. Infection usually occurs through the sputum, which contains millions and millions of these bacilli. It is only dangerous when it dries and becomes pulverized and the bacilli are thus disseminated in the air. This most frequently happens when it is spit on the floor or into handkerchiefs. The drying of sputum is a source of danger not only to those who come in contact with consumptives, but also to the invalids themselves, as they are apt to reinhale or reingest the bacteria which they themselves have expectorated and thus infect portions of the lungs or other tissues which were previously healthy. Public measures for the restriction and prevention of tuberculosis are:

1. The establishment of free sanatoria in the country

for the treatment of incipient and moderately advanced cases, and also farms for convalescents.

2. The establishment of city hospitals for the treatment of advanced cases in the wards, and of dispensaries for ambulatory cases.

3. Registration of all cases and thorough disinfection of all houses in which tuberculosis has occurred.

4. Government inspection of dairies, slaughter houses and herds.

5. The organization of societies for the prevention of tuberculosis.

Measures for the prophylaxis of the individual are:

1. The absolute control and destruction of the sputum. This can only be done if the patient spits into paper spitboxes or paper napkins, which are subsequently burned. Spittoons should not be used.

2. Care and cleanliness in the home, in respect of dust and dirt, and in disinfection of articles contaminated by use.

3. Tuberculous persons should sleep alone. The room should have no unnecessary drapery or furniture and the windows should be kept open both night and day.

Personal prophylaxis is inspired by the fact that the consumptive, if scrupulously clean, is not a source of danger even to his immediate environment. If the above directions in regard to sputum are strictly observed, association with consumptives and the care of them is ordinarily without danger (Cornet).

In conclusion, permit me a word of exhortation. There is nothing done without faith, and you must have faith that these things are so, and that the end for which we are striving will be brought about. Remember that it is not a lost cause or a forlorn hope I am offering you. This is a scourge which can be practically eradicated. Believe me, that time will come.

The bloody war in Manchuria is only more terrible in idea and not in fact. The tens of thousands of human beings given over to slaughter for cause which few of them understood is only more appalling in its barbarity and its futility. But here is a grand cause in which you may all fight without injury to yourselves or loss of life, where you may display a greater and a grander heroism, and where the end and reward is a priceless heritage to yourselves, your children and humanity forever. The civilized world to-day stands aghast at the welter of blood in the far east. At our very doors is a greater depth, whose victims are as a hundred to one, which decimates humanity year by year and century after century.

1404 Spruce Street.

LED ASTRAY.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON PHARMACOLOGY, AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, PORTLAND, ORE., JULY 11-14, 1905.

HEINRICH STERN, M.D.

NEW YORK.

A cat, who had lived for years with a family and was beloved by it, on one of his nightly strolls, met an owl. "Oh, bird of wisdom," exclaimed the cat, "how I wish that I had some of your learning! I pray you take me with you on your explorations and be my instructor." "Hoot, hoot," answered the owl; "and what will be my reward?" "I will give you all the mice that I catch," responded the cat, "and I am deemed an able hunter."

From that time on the cat accompanied the owl, sat at its feet and listened to its wise sayings. But with the newly acquired wisdom the cat grew arrogant; his former associations, his simple life, the fireside where he had so long been welcomed, the gentle care of the housewife, were forgotten by him or disdained.

"I am no longer your pupil, owl," said the cat; "learning has made me your equal; take me into the midst of your wise consorts." "Ta, ta," sneered the owl, flapping his wings; "my consorts can fly; can you?" And away he flew.

The disconsolate cat wearily wended his way back to his old home, but the housewife did not recognize him, and at his place on the hearth another cat was warming himself. Left without a home and without companions, the old cat sighed: "Oh, what avail is my wisdom now?"

The moral of this fable in its relation to medicine of to-day is pertinent. In the cat, before he strayed, we may recognize the medical practitioner of old, beloved by his patients who admired his unflinching devotion to his vocation. The owl, the personification of learning, lures the practitioner from well-trodden paths of duty and leads him astray into unexplored regions. There the old ties which bound him so lovingly are sundered, he loses his identity and henceforth must walk apart. He occupies an isolated position now; the old associations are discarded, and when he yearns to take up his duties of yore he must see, to his chagrin, that his place at the hearth of family affection is occupied by a stranger. Thus he strays aimlessly about, disdainfully regarding humble efforts of others, blaming fate for his misfortunes and failing to see in his shortsightedness that he himself is the cause of his passing. He ascribes his political impotence to social ostracism, and his financial débacle to an overcrowded profession, to the proliferation of healing sects, to the craze of self-medication and to a score of other causes, while in reality he is the author of his own ill-fortune, because he has ceased to be a true physician.

The one who addresses you has always worked in the scientific field; he has for years maintained his own laboratories for biologico-chemical study, and he is now the head of an institute for medical research in the city of New York. With all unbiased experimenters he deeply deplores the trend of modern pathology and the meager, definite and employable data furnished to practical medicine by the laboratory. He has no delusions as to the "science of medicine;" he knows that it is still unborn. Moreover, he is aware that medicine, devoid of its religious, mystic, philosophic, sophistic and so-termed scientific embellishments, resolves itself into the art of recognizing disease, predicting its course and ameliorating its various symptoms. Medicine is an art requiring no innate talent and differing from painting and sculpturing inasmuch as it demands no creative force, but may be acquired and practiced by any one possessing clear understanding and common sense. Firstly and lastly, the object of the healing art should be the alleviation of the physical and mental distress of the patient—the true physician is the comforter of the patient. The prognosis takes the second place in practical medicine—the patient and his family are anxious to learn what course the disease will run and how much hope there is for recovery. Thirdly, the diagnosis follows. The least important in practical medicine is the pathology, for which the patient evinces hardly any interest. The patient is really only concerned about the treatment and speedy recovery. How his disease is termed and of what nature the pathologic processes are that take place, these are questions which the patient,

as a rule, considers only when the treatment has proved of no avail. To make a correct diagnosis, of course, requires not a little proficiency, and to this fact, no doubt, the widespread customary expression "the science of diagnosis" may be ascribed. But in all earnestness is it not at least as much an art as a science to recognize a disease? Is it not in most instances the personal experience, bedside experience, by which we differentiate the many symptoms and recognize the disease? Take it all in all, how rarely does the general practitioner resort to test tube and microscope, and still, if he be a master in the art of observation, he will know whether he is dealing with a case of typhoid fever or gastric ulcer or pneumonia.

While diagnostics have taught us many new forms of disease and the discrimination of the various forms, it offers no enlightenment as to the causes and conditions which give rise to a symptom-complex, except perhaps those of infectious diseases.

Again, two physicians may have gone through the same course of instruction; they may have seen an equal number of patients affected with similar diseases; they may both be equally well versed in the system of recognized diagnostic principles, but one may be endowed with a finer touch, with a finer ear and a keener perception—faculties which make the artist. He thus becomes a more clever diagnostician. He is the greater artist of the two.

Even the foremost of diagnosticians would not claim that his special branch was a perfect science. He is fully aware how much depends on the personal equation. He has very little real use for one-sided laboratory diagnosis, and only in doubtful and disputed cases will he accept the verdict of the fledgling of the laboratory. He is the artist and is, therefore, impressed with his own importance. He surpasses his colleague, not on account of his greater learning, but through his greater skill, the result of his finer sensory perceptions. If diagnostics were really a complete science in itself, then all clinicians possessing the same amount of experience would be equally good diagnosticians. But we know the fallacy of this presumption.

And what obstacles do we, who strive to make diagnostics a science, encounter! What an enormous amount of clinical material we must have observed, what a mass of pathologic and chemical studies mastered ere we can boast of having attained even the minutest progress in the method of diagnosis which serves to perfect the recognition of but a single characteristic symptom! And, finally, how often, after all, can a perfectly positive diagnosis be made when an organ whose situation makes it unreachable by ear or eye is involved? If all diseased organs could bear witness—I mean not only those which have been subjected to necropsy, but also those which again have become sound—what would remain of our glorious science of diagnostics? We who work in laboratories, in clinics and at autopsy tables must concede, if we are sincere, that the greater part of the diagnostics of to-day really belongs to the sphere of art and not to science.

Let us linger for a moment in the domain of pathology and ask what service, if any, it has ever rendered to the common every-day practitioner of medicine, for it is of him and not of the different specialists I speak. If we come to the point, it is in reality nothing else than the antitoxin for diphtheria which pathology has furnished him. Everything else emanating and taking its root from the science treating of the nature of disease for the purpose of curing the latter has proved ephemeral, in vain, illogical and unscientific.

And now to the prognosis, which, in my estimation, is next to the treatment, the alpha and omega of every patient. Of course, it should be based on the diagnosis of the disease, as has again been stated by Dr. Dock[1] last year in his excellent oration before the American Medical Association. It goes without saying that this would be the desideratum. The case can not always be accurately diagnosed, however, especially at the onset, and not every individual practitioner who is an optimist and a fair therapeutist is endowed with the proper amount of precise reasoning. In the same address, on the other hand, is advocated the principle that "in practical prognosis we must individualize, just as we have to in therapeutics, with the patient's welfare ever the object of our activity." Avowedly, prognosis thus must be looked on and fostered as an art primarily and not as a science.

And therapeutics—what has this main branch of medicine to do with *de facto* science? Very little, indeed. It is true, we presume, we know at this day why quinin acts in malaria; still the drug was prescribed with the same good results and millions were amassed in its manufacture many, many years before Lavaran's discovery of the plasmodia; we also pretend to be acquainted with the specific activity of a number of other drugs, but our forefathers in medicine, not knowing their specific qualities as we suppose we do, have employed them for similar purposes as we on the threshold of the twentieth century. It is certainly most gratifying to understand the pharmacodynamics of a drug—I mean the physical and chemical alterations it elicits in the organism—to know why it exerts a beneficial influence in a specific case. The practitioner, as a class, has never evinced a special craving for this sort of knowledge. He has always been content to know that a certain remedial agent was effective in reducing a certain symptom or set of symptoms. Why this should be so was little concern of his.

All peoples at all times have endeavored to mitigate disease. The sick were nursed and treated ages before one had the slightest conception of the structure of the human organism, not to speak of the various functions. The ancient priest-physicians, though, were adepts in the art of healing, for the people confided in them and the temples of antiquity were resplendent with the gifts of the grateful patients. Systems of medicine have come and gone; one school, one sect, has superseded the other. In principle and theory they might have differed widely; in practice they might have employed discrepant means; their object, however, was always the same: to relieve the unnatural, the distressing phenomena. Internal therapeutics, at all times, in spite of occasional attempts at rational medication, has always been aimed at the symptoms and not at the underlying factors of the disease. And how could or can it be directed against the cause of the disease when this was and is not understood? In this, the bacteriologic era in medicine—an epoch solely due to the perfection of the microscope, the introduction of stains and the methods of pure culture—the subject of rational medicine is again foremost in the mind of the medical fledgling. But what about his rational treatment? Well, for that cough he prescribes codein or some expectorant, for that fever some coal-tar product, for gastric indigestion

1. The Journal A. M. A., June 11, 1904, p. 1540.

(and almost every case of gastric indigestion which I ever encountered was due to carbohydrates) pepsin, and for constipation—well, once in a while cascara sagrada, because one can not always keep the patient on cathartic pills or calomel.

We are not at all justified to speak at this day of our rationalism in the practice of the healing art, for what we are practicing is everything else but rational medicine. The treatment afforded by surgical measures may be rational in as far as it is directed against the cause of the affection. Internal medicine, on the other hand, is still helpless and has to combat the symptoms or the condition. Of course, the adherents of the modern medical fetiches, bacteriology and serumtherapy, if at all, will admit this with great reluctance only. The new graduate recognizes these facts instinctively when he wants to pose as a surgeon. I can not concur with the prevailing opinion that the young physician takes to surgery or to one of the surgical specialties merely on account of the probably greater pecuniary benefit he may derive from their practice. Besides apishness, the feeling of grandeur, the illusion of a resplendent social position and a mediocre intellect, I think it is nothing else but the therapeutic uncertainty and agnosticism fostered especially by the modern pathologic school in which he has grown up that prompts him to cast his lot with quick-results-yielding surgery.

Almost the entire science of therapeutics is nothing else but more or less refined and varnished empiricism, all protests to the contrary notwithstanding. The better a practitioner has trained himself to administer to the immediate needs of the patient the better a physician he is. Those who are adherents of the Vienna School of Medicine, the cunctators in therapy, may have a proper conception of the futility of influencing the course of disease by remedial measures. They may be close observers and shrewd diagnosticians, which by no means stamps them better practitioners, practitioners in the sense of alleviating the patient's mental and bodily discomfort. Is it not quite inhumane to follow to the letter the dictum of Skoda, who said: "We are able to diagnose, describe and understand a disease (when it runs a well-known typical course, I would add), but we must not believe that we are able to cure it by any of our remedies?" Of course, we can not materially influence disease in the great majority of instances, but we can mitigate its symptoms very frequently. The followers of Skoda wanted to be rational, and consequently did not even make an attempt to treat the patient. Was not Boerhave, with all his shortcomings, the greater physician who treated symptomatically and who, when presenting a case at his clinic, could exclaim to his audience: "Hear ye, and admire the power of the medicaments: we have conquered all the symptoms!"

Skoda, on the one, and Boerhave, on the other side, represent the extremes in school-therapeutics of all times. And yet not quite a century and a half intervened between the advent of the two. On both sides consciousness of the ignorance concerning etiologic treatment: on the one side, in consequence, therapeutic despair, lethargy and nihilism: on the other, overestimation of therapeutic influence, drug delusion and enthusiasm and polypharmacy, and on both sides a good deal of credulity, unjustified hope and mysticism.

We know now that most, if not all, the so-called infectious diseases are self-limited. The effect of remedial measures on the underlying condition is nil, or almost so, in every instance. But is this any reason why we should leave the patient suffer? Should not we try to relieve his pain, his fear, his dyspnea, and the many other distressing phenomena? As a matter of fact almost every one of us follows the precept of symptomatic therapy; the very moment, however, we play the good samaritan we are decried by the so-called medical scientists on account of our empiricism, for we employ drugs of the ultimate action of which—in the light of our day—we know but very little.

Possibly I have painted somewhat too darkly, possibly I discriminated too sharply between science—real science—and the healing art. Yet it must be plainly evident to everybody who cares to see that the light of universal science, notwithstanding all radium fanaticism, thus far does not shine, and may never penetrate, into the depths of life and disease, and that the practice of medicine of to-day differs only in degree and not in character from that of our immediate predecessors.

The naive practitioner does neither know nor would he believe this. He imagines himself a man of science and chases after phantoms just in vogue. He weaves theories which can not be proved and swallows everything of a pseudoscientific character as long as it bears the stamp "made in Germany." If a theory, and be it ever so abstruse, absurd and incomprehensible, hails from the land of Virchow, Koch and Billroth, we on these free shores receive it with profound respect, reverence and open arms, and soon become interested in it, more converted to it than its propounders. Verily, another case of being more catholic than the pope.

In his search for that which he considers science—hypothesis and a series of mostly misinterpreted facts which are utterly useless to him in his practical work—the physician of to-day forgets that he is, above all, the confidant and the comforter of the patient and his family. He forgets that his purpose should be to help the sick and that he must be up and doing. He forgets that the sick individual cares little for the bacterium babble and his numberless theories, but that he desires to get well and to be relieved from aches and pains as speedily as possible—at once. He forgets that he is dealing with an individual and speaks of him as his case only. In his ardent quest for that putative science he has lost the most potent charm of the physician—sympathy, that eternal sympathy for the suffering which is often more effective in alleviating the patient's condition than all pain-soothing remedies. He has become coarse-grained and does not seek to hide his callousness from the patient; on the contrary, he tries to impress the patient with it, for is this not the surest way to inspire him with awe and reverential respect for himself, the master of the situation who has deeply quaffed of "science," with which he is saturated?

Can we marvel, then, that his practice dwindles from day to day? Is it thus surprising that we hear of "the passing of the family practitioner" from one end of the country to the other? Small wonder that the refined and sensitive public shuns him by degrees, delving instead into mystic lore and seeking admission into mystic sects! Need we wonder why the lower classes do not consult their physician any longer and buy their patent medicine trash wherever they can procure it cheapest? The patient probably does not doubt the physician's learning, perhaps he would have himself treated by him and pay the (alas!) too modest charge if but a little sympathy, a little mental comfort, were thrown into the bargain.

Sympathy and the skillful execution of his profession

make the successful practitioner. Where the physician who is endowed with common sense and humanitarian instincts puts up his tent—there mystic sects and their systems of healing find little following, there the manufacturer of patent medicines reaps no benefit. Such a physician still enjoys the confidence of his patients; he is the father-confessor of the entire family, he is a member of the town council, collects his bills and is a man among men. What a different picture unfolds itself where the fetich of science with its concomitant huffishness, airs and disregard for the patient's welfare has taken possession of the pupil of Æsculapius! There we find a few professors riding in automobiles, drinking champagne and having the pecuniary means to imbibe annually at the fountain the wisdom of Teutonic phantasts, but there we find domiciling in the unfashionable quarters lean and round-shouldered individuals with empty pockets and stomachs waiting for patients in whom they want to inject imported serum; they vegetate and become paupers, or make a dash for liberty and turn book or medicine or insurance agents, or anything else, but hardly ever become true and ideal physicians, because it is not in the nature of the beast. These are the men who in youthful idealism have embraced what they thought to be a definite science, but it proved a fetich which estranged them from their real calling and spoiled their useful career.

For the sake of argument, let us for a moment waive the question whether that which is considered scientific medicine is a real or pseudo science. Unfailingly we will come to the conclusion that too much hypothesis in medicine is averse to the calling of the physician, as it is averse to the devoted exercise of religion. A physician need not, nor should be, the possessor of much complementary or theoretical knowledge; if he has the gift of[2] quick and intelligent observation, together with the ability of associating ideas, if, in short, he is a man of shrewd common sense, it is by no means necessary for him to possess high erudition and scientific attainments to become an excellent practitioner of medicine. A physician of that caliber, even without marching in the limelight of scientific supremacy, may be an ornament to his profession. On the other hand, the physician as a so-called scientist may contribute the most learned (though abstruse and highly hypothetical) dissertations on the special subject of explorations which he has chosen as the task of his life; his presumed, scientific attainments may far exceed those of his humble confrère, the common-sense practitioner; and yet, for that matter, there is no conceivable reason why he should be a greater or even as great a factor in the real progress of medicine. On the contrary, it is more than likely that he so binds himself up with that comparatively narrow circle of vision that pertains to his special branch of science that he is likely to approach everything from his own narrow standpoint, look at everything through spectacles clouded by personal prejudice, try to explain matters of general import—so far as he attempts to explain them at all—from his own special point of view. He may, in fact, dote with the greatest possible application and fervor, with the zest and enthusiasm of the true scientist, on minute details, but fail in the rudimentary principles of the common-sense practitioner. He lacks the power of initiative and force of creation. If nature had ever bestowed these priceless gifts on him he is almost certain to lose them through one-sided study, through concentration on one more or less theoretic subject.

Representatives of theoretical medicine, such as these, will but scantily contribute toward genuine progress in spite of the isolated discoveries which may, at distant intervals, light up their monotonous plodding like an unexpected shooting star in the dreary black of a dismal autumn night. When these hypothetists have once enshrouded themselves in their pet theories and notions, for the nursing of which they may have spent the best part of their lives, it is very difficult and almost impossible for them to give the same up in favor of results attained by the genius of others, faulty though their own researches have proved. In this respect they are veritable champions of retrogression; they obstinately cling to their own doctrines in which alone, they think, salvation lies ensconced, and thus produce a stagnation on the very field the cultivation of which they profess to have elected as their special domain. They thereby brand themselves as representatives of a doctrinary science—a science which has ceased to live, and which in reality is no longer a science from the moment that it is recognized to be false. Essentially great questions which have a true bearing on the health of the individual, the health of the nation, the health of the human race, have never been asked by these representatives of theoretical knowledge, but rather by those practical men who have no time for specifically theoretic pursuits. From this point of view it would appear that the general practitioner who mixes with the people, who looks into the houses, into the beds, and into the stewpan, who knows the world at large, and also the particular world in which he moves, who not only observes things, but also associates them with surrounding circumstances, can contribute far more food for the solution of human problems than his brother who works with microscope and test tube. It is no cause for wonder, then, that the really great questions affecting the natural sciences have never been asked by professional scientists, nor is it cause for wonder that so many medical discoveries have been made—not by those who have devoted their lives to the confines within which the discoveries ranged, but by the unknown practical men who can not boast the highest scientific education, and whose names are not always chronicled on the scroll of fame.

And now you know whom I consider the ideal, the true physician. It matters not to me what he prescribes to accomplish his immediate end, so long as he knows what he is prescribing. I don't care whether the drug which he employs is made in Germany or whether it is compounded in this country, whether it is patented and trade-marked or whether it is simply trade-marked. In this respect, all coons look alike to me. If he finds it convenient to prescribe or dispense a combination of known composition bearing a copyrighted name, that is simply his concern and nobody's else. It is a peculiar taste, I avow, to order something which is trade-marked and which could be dispensed for a small fraction of the price the patient has to pay for the copyrighted article. However, this is the individual practitioner's concern and not mine. He may have weighty reasons for preferring the put-up preparation. Again, will the patient be the financial gainer by obtaining a combination of the doctor's specification, will the dispenser not charge about the same amount for, say, twelve powders whether they contain the copyrighted or a similar ar-

2. Part of the following has already been published elsewhere.

ticle compounded in his shop? To me, the entire question of patented and proprietary medicines of known composition is a contest between the manufacturer and the dispenser, whether the one or the other shall pocket the profits. It is a humane trend to sympathize with the under dog, and thus we offer our moral and material suport to our friend, the druggist at the corner.

We physicians are mighty queer people. Up to the brim we are full of inconsistencies. We may be starting in practice and get along with two meals a day, but we fail to send our bill to the well-to-do father of a colleague, or to the political boss; we are timid and shy, but agitate with all our energy for the erection of new dispensaries and hospitals; we dismiss our colleague's diagnosis of a case with a shrug of the shoulder, and are ourselves supersensitive what others think and say about us; we tear to pieces our fellow practitioner's literary attempts, but we are staunch believers in the moloch of medical authority. We are going astray because we are inconsistent in our daily life, because we have ceased to believe in ourselves. We may live to see our débacle because we are misconceiving our calling, because we have lost our understanding for the real needs of the patient, because we leave the drying of his tears to a nurse, because we make our night calls by telephone. We have so little time for the patient, in the morning we have to make an examination in the laboratory, must be in the surgical amphitheater in the afternoon, must not fail to discuss our neighbor's paper—for he is our good friend—at the district meeting in the evening, and then we must not forget to see the boss, the senator, on account of that job with the railway company.

Orthodox medicine of to-day, with its shallow doctrines—masquerading as "science"—has estranged us from our real calling. Let us tear off that orthodox yoke! Let us preserve our individuality! Observe for yourselves, think it out for yourselves, give your sympathies to your patient and give him your help and don't wait for a specific curative serum. Drop that which medical autocrats have presented to you as "science"; it is an encumbrance on your energy as true physicians, it makes you uncertain in your therapeutic activity, it destroys your belief in the efficacy of your symptomatic procedures without bringing you nearer to the goal of rational medication.

I respect the heroes of the microscope and the biologic test; they, of course, are in deep earnest about their work; they are optimists and Don Quixotes, but their little field is narrow and entirely devoid of paramount stabile facts. The meager results which they have obtained to this very hour are absolutely insufficient to build thereon the superstructure of medical treatment. Will ever their microscopic and biologic testing create for us a new paradise where disease finds its alleviation and cure? Does not the true man of science feel rather sceptical about this? Is not the true man of science a good deal less hasty in proclaiming to a credulous world a new-found fact, is he not one who refrains from enunciating vague speculations thereon?

The more hasty such professional investigators, the more insincere and unscientific they are. Those in subordinate positions, as a rule, are the more conservative ones; they work and are in earnest. It is different with a great number of inflated pygmies in the professorial chairs. Comments made by the *Electrical World and Engineer*, May 27, 1905, anent hasty scientists fit their case admirably. Says this editorial:

It is now near two and a half centuries since Isaac Newton, in one of the flashes of intuition that form man's best title to mortality, saw disclosed to him the key to the mysteries of space. It was a half lifetime later when, through years of patient study and waiting, data enough had come to his hands to clear his conscience in announcing his discovery. For very truth's sake he gave to the world no half-baked hypothesis nor ventured to exploit with specious arguments a doctrine which did not quite meet all the facts. We do things differently nowadays. How would the great discoverer have fared had he occupied the chair of physics at ——— University, where a monthly blank is forwarded to heads of departments to be filled out with reports on the "researches" they have completed and the number of lectures they have given before women's clubs? Would he have held his peace, or would he have sent for a reporter of the *Daily Saffron* and have filled him full of speculations on the bounds of space and the origin of life? Would he have cut up his great hypothesis into stove-lengths, as it were, to furnish his hustling pupils fuel for frying their theses? Would we have had Prof. I. Newton and Thomas Snoobs, B.S., on "Gravitation in Jupiter," and Prof. I. Newton and Richard Roe, A.B., on "Gravitation and Saturnian System," and so on *ad nauseam*? And would the president have sacked him for insinuating that something in the universe had a more consistent pull than the chief benefactor?

These remarks, called forth by a number of articles on the characteristics of radium, are continued, thus:

We are far from denying the possibilities of the working hypothesis assumed by Rutherford and his confrères, but what would Newton have done? Would he have left, before developing the results of his hypothesis, any stone unturned that might give him light on its fundamental correctness? Profoundly interesting as are theories of the genesis of the so-called elements, they furnish no adequate excuse for neglecting to examine the elements at hand. Take, for example, the substance radium itself. There is good reason to assign it a definite place among the other elements, and a rational set of chemical and physical properties quite apart from its radioactivity. *Who, of all those who have theorized about its radiations, have any knowledge of the physical properties of the metal,*[3] with the bromid of which they are daily working? *Is there anybody, indeed, who can affirm from actual knowledge that the metal radium is radioactive at all?*[3] Radium salts are, unhappily, costly, the latest newspaper quotation being $3,000,000 per ounce, but the subject is surely of sufficient importance to justify some one in trying to produce a few milligrams of the metal. Again, it seems to be well established that radium salts give off heat spontaneously and steadily, as an accompaniment to their radioactive activity. But there has not yet been any adequate investigation of the actual cause of this thermal energy.

We have had any amount of speculation based on the assumed endothermic properties of radium, including a voluble explanation of the source of the sun's heat and the interior temperature of the earth, but there has not been yet a really serious attempt to determine whether the phenomenon itself is primary or secondary—due to disintegration or to the return of energy received from exterior sources. Everybody seems to have jumped at the former conclusion as the striking and sensational one without further discrimination. Likewise, in the case of radium emanation, we have on good authority the appearance of helium as a decomposition product. Radium has a definite spectrum and so has helium, but, although the spectroscopic study of this mysterious evolution of helium ought to show clearly and certainly the whole progress of atomic disintegration, no word has yet come to enlighten us. The true and faithful student of radioactivity seems to hold old-fashioned chemistry as anethema, and the spectroscope, that magic wand that has turned back the veil from interstellar abysses, as a deceit of the devil. Now the subject is a tremendously important one—we began this comment intentionally with a reference to gravitation—and it deserves the best efforts of the greatest investigators. The

3. Italics mine.

thing which we would impress on them, however, is that hypothesis needs to have its wings clipped a bit just now. It is well to remember Newton's immortal lesson in scientific self-restraint, and to make sure of one's foundations, before building a new heaven and a new earth from anything so elusive as radium emanation.

Yes, hypothesis needs to have its wings clipped a bit just now, especially when it springs from shallowness and is conceived in insincerity. Hypothesis, masquerading as science, is the fetich to force you in the bondage of those who like to have themselves called authorities, but who are too indolent and too sterile intellectually to do original work, to do anything for which cash is not forthcoming immediately. These are the drones in the domain of medicine who arrogate for themselves the meat and magnanimously leave for you the bones. These are the men who have invented for you the worship of the new fetich, "medical science;" these are the men who have led you astray. Like hornets disturbed in their nest, they will resent the intrusion and with the poison of their stings will seek to render futile the purpose of this address.

And once more I implore you: Away with the fetich, down with the false gods!

Original Articles

SINUS THROMBOSIS.

A REPORT OF TWO CASES, WITH MASKED SYMPTOMS.*

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In presenting these two cases of sinus thrombosis, I desire to call special attention to the following points:

1. The thrombosis in each case, although of otitic origin, was masked by the symptoms of the other diseases,—in the first case by coexisting typhoid; and, in the second case, by a history of malaria.

2. The so-called classical symptoms of sinus thrombosis, namely,—chills, fever and sweats, were not present in either case.

3. The thrombosis in each case was suspected by certain irregularities in the history which led to uncovering and carefully examining the sinus, after the mastoid ablation.

4. The thrombosis was demonstrated in the first case by purposely opening an apparently normal sinus.

CASE 1.—E. H., a sailor aged 38, was admitted to the Los Angeles Infirmary Feb. 21, 1904, with a temperature of 104.2 and the general symptoms and signs of typhoid fever.

History.—The course of the disease after the patient's admission to the hospital was typical. He was irrational at times and gradually lost his weight and strength. On March 15 a sudden rise of temperature to 104 called for an examination of the ear, from which there had been a purulent discharge. The temperature for the preceding two weeks had been regular, from 101 to 102 in the afternoons and from 99 to 100 in the mornings. The aural suppuration dated back two and a half weeks and followed earache of a few hours' duration. There had been a little pain off and on in the affected ear. The discharge continued and the ear was being carefully syringed. The patient had complained very little of the ear, and it was considered a doubtful factor in the rise of the temperature.

The notes made at the time of my first examination, March 15, are as follows:

"Temperature, 104; pulse, 74; general condition bad; emaciated and weak; answers questions rationally when aroused, but soon relapses into a typhoid condition. The examination of the ears shows a purulent discharge from the left ear, sagging of the posterosuperior canal wall and an inflamed bulging ear drum, with a small insufficient perforation. The mastoid shows no edema or redness. Very slight tenderness is elicited on deep pressure over the antrum and tip of the affected side. The right ear is normal. The nose and throat are in good condition. The eyes are normal. There are no motor or sensory disturbances."

The quantity of the middle ear discharge and the sagging of the posterosuperior canal wall rather indicated mastoid involvement, in spite of the lack of pain or marked tenderness. The drum membrane was freely incised on the following morning to obtain better drainage, in the hope that a mastoid operation could be deferred until there was some improvement in the typhoid condition. During the next three days the temperature fluctuated, the morning temperature being from 99 to 100 and the evening temperature as high as 105. There were no chills or sweats, no vomiting, and the rise in temperature was regular and occurred in the evening hours. The discharge from the ear was profuse. A mastoid operation was finally considered necessary.

First Operation.—Mastoid, March 19, four days after the first aural examination. The mastoid cortex was found hard and not perforated. The superficial cortical cells were full of granulations, but contained no pus. The deeper cells, especially those of the tip, were full of pus. When the antrum was opened several drops of pus welled up. The zygomatic cells contained pus and granulations. A complete ablation of the cellular structure of the mastoid was made down to the hard bone covering the sinus and to the inner plate of the middle cranial fossa. The cells over the sinus groove contained mucopus. The bony plate covering the sinus was found to be hard and intact from the knee downward. Behind the knee it was found somewhat softened, and at this point the sinus was purposely uncovered and examined. It was blue in color, soft, and except for a slight capillary injection of the dural coat, it was apparently normal, and, therefore, was not opened. The mastoid cavity was packed with iodoform gauze and the usual dressing applied.

Postoperative History.—During the next three days the temperature varied from 99 in the morning to 103 in the afternoon. The mastoid wound was dressed and found clean on the second day. On the fourth day the evening temperature again rose to 105.5 without any chill, vomiting or other disturbances, except pain in the opposite shoulder. This pain had been complained of for several days and was so intense as to require morphia. There was no pain in the head, and no pain or tenderness on either side of the neck. Careful examination excluded pulmonary, cardiac or abdominal complications as possible causes of the irregular fever. As the fever indicated septic absorption, it was determined to open the lateral sinus, which, in spite of its normal appearance, might contain a thrombus. On account of the weak condition of the patient the sinus was opened without moving him from the bed. The usual precautions were taken to prevent infection and to control the bleeding. The sinus, where previously uncovered at the knee, was opened with a knife and found thrombosed.

Second Operation.—Resection of the lateral sinus and internal jugular vein. March 24, under ether anesthesia. The bony plate covering the sinus was rapidly removed from the knee downward, as close as possible to the bulb, and behind the knee for about one inch. The sinus wall was thin, not inflamed, and would easily pass for normal. The wall was incised from the opening made at the knee, downward as far as possible and soft clots gently removed. The upper end of the sinus was then curetted of soft clots until a fresh gush of blood occurred from the torcular end. This was controlled by pressure. An attempt was then made to establish a return flow from below by gently curetting the clots from the bulb end of the sinus. Failing in this, it was imperative to ligate the internal jugular. The vein was rapidly exposed and ligated above the omohyoid muscle, and resected from this point upward and ligated about one inch above the facial branch. The part of the vein removed was not thrombosed

* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

and no effort was made to resect the thrombosed portion at the jugular bulb. The pulse became so weak during the operation that it was necessary to give an intravenous injection of hot saline solution (130 F.) at the elbow. Hypodermic injections of adrenalin were also given. The neck incision was partly sutured, the usual dressing applied and the patient returned to bed.

Result.—The reaction from the operation was fairly good. The temperature, however, continued high and irregular, but without chills or sweats. Rather as an experiment, antistreptococcic serum was used by hypodermic injections, 20 c.c. at a dose every twenty-four hours during the next four days. No benefit was observed. Low, muttering delirium was more or less constant. Death occurred on March 29, six days after resection of the thrombosed sinus and vein.

Autopsy.—The notes made at the autopsy are as follows: "The body is considerably emaciated. There is a large bedsore over the sacrum. The mastoid wound is clean; the torcular end of the sinus is plugged by a small, firm clot at the cut end. From the jugular bulb a soft clot is pulled out; it does not show septic disintegration. The dura is normal except for some congestion. The cerebrum and cerebellum are normal. The neck wound is clean and free of pus. The ligated upper end of the jugular vein, near the bulb, contains a soft clot. The lower end of the jugular is securely closed by ligature and is normal. The small intestines show several typhoid ulcers, each the size of a dime, near the ileocecal valve. There is no perforation of the intestines and no evidence of hemorrhage."

Microscopic examination of the clot from the jugular vein by Dr. Stanley Black, Medical Department of the University of Southern California, was negative; the examination of the typhoid ulcers showed them to be of several weeks' duration and without any apparent tendency toward healing.

Remarks.—The cause of death was septicemia, resulting from the sinus complication. The septicemia probably had commenced, judging from the temperature chart, as early as March 15, when I first saw the patient. The active typhoid symptoms and the weak condition of the patient obscured the sinus symptoms. The sinus was probably thrombosed at the time of the first operation, when it was uncovered and examined, but not opened. That the sinus wall showed so little evidence of its true condition is possibly due to the fact that the thrombosis did not result from direct infection of the wall by continuity, but through some of the venous channels of the mastoid opening into the sinus.

The second case of sinus thrombosis presents a very different history in nearly every respect and the thrombosis would not have been discovered except for an exploratory mastoid operation rendered necessary by reason of a vague malarial history following an acute aural suppuration.

CASE 2.—A. G., a man, aged 20, was referred from the medical to the ear clinic of the Medical Department of the University of Southern California on account of aural discharge and some mastoid tenderness. He had sought and received medical treatment on account of chills and fever, the ear complication being a complication of secondary importance.

Examination.—At his first aural examination, March 20, 1904, Dr. W. D. Babcock, in charge of the ear department, found some tendencies on deep pressure over the mastoid and turned the case over to me, his assistant, for treatment. The patient stated that his ear trouble dated back two months and a half. It began by buzzing noise and deafness in the right ear. The discharge began six weeks later, without much pain, and still persisted, although gradually diminished in quantity. He claimed to have had a chill three or four weeks before seeking treatment and thereafter a chill every day or two. The examination notes made April 1, are as follows:

"The general condition is good except for some pallor. Temperature, 99; pulse, normal. He complains of attacks of chilly sensations and sweats, and severe pains in the mastoid during the past few days sufficient to prevent sleep. Examination of the right ear shows a scant purulent discharge; a dull red drum membrane, with an oval perforation in the lower anterior segment, no bulging of Schrapnel's membrane; no sagging of the postero-superior canal wall; no granulations. (The appearances were those of an acute purulent otitis media that was subsiding). The hearing is considerably affected in the right ear,—watch, negative, conversation is questionably heard, stage whisper 6 inches; speech 1 inch. The mastoid shows no redness or edema; slight tenderness over the antrum and tip, but acute tenderness on pressure over the emissary vein. The left ear is normal."

The history of chills and sweats for which the patient was being treated in the medical clinic, was then looked into. He stated that the first chill occurred three or four weeks before, while in Mobile, Ala., and that chilly attacks and sweats had occurred irregularly since then. The attacks were not well marked. There were no sharp paroxysms. He had been taking quinin for several weeks. The tongue was pale and flabby; skin and conjunctiva anemic and spleen slightly but palpably enlarged.

Blood Examination.—Blood smears were made and sent to the laboratory for examination for malarial organisms, and the patient told to report on the next clinic day. The laboratory report stated that blood smears from this patient had been sent in from the medical clinic and malarial organisms recorded as present.

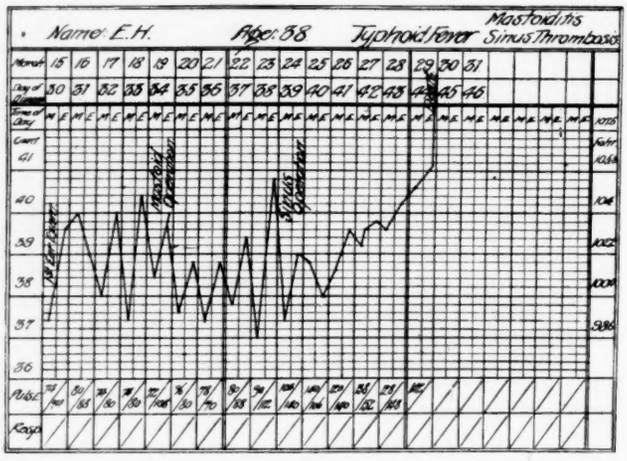
Course of Disease.—By April 19 there was no change in the condition. Vague pains in the mastoid and head persisted. Several examinations failed to show any fever. The aural discharge had about ceased, but the tenderness at the posterior border of the mastoid was quite acute. For this reason, a mastoid operation was advised, after consulting with Dr. Babcock. It was explained to the patient that much or little might be found; and his consent was obtained in writing.

Operation.—April 10, mastoid ablation; resection of the sigmoid sinus. The mastoid cortex was found hard and normal. The subcortical cells were almost obliterated. Hard bone was removed with a gouge for a considerable depth before any mastoid cells were found. These were small, and full of granulations that bled freely. Deep in the tip a cell of some size was opened and contained cheesy material. The antrum was opened through partially sclerosed bone and found to be small and to contain some granulations. A posterior straight incision was made and the flaps reflected. The cortex over the sinus was hard and thick and was removed with a gouge, exposing a small cavity of cheesy material about one inch behind the bony canal. A complete ablation of the mastoid was done down to the hard bony plate covering the sinus and above to the bony plate of the middle cranial fossa. The latter was normal and the dura was not exposed. The cavity was dried and examined. Except for a dark discoloration of the bony plate covering the sinus, deep in the tip, there was no evidence of any diseased structures not already eradicated. The findings had proved to be those of resolving mastoiditis, sufficient to account for the mastoid pains and tenderness. It was remarked that the pathologic changes were those that tended to, and would likely have resulted in, sclerosis of the mastoid.

The history of chills and sweats, however, prompted us to uncover and to examine the sinus in order to be assured that it was normal. The cheesy mass that was found and cleaned out at the tip and the dark color of the bony groove behind this cavity pointed to this region of the sinus for examination. The overlying bone was carefully removed, whereupon some little pus escaped. The sinus was then uncovered from this spot upward to the knee. The wall was found to be covered with a thick, yellow exudate. Below, where the pus came from, there was a small protuberance. At this point the wall was ulcerated, and some of the pus evidently came from the lumen of the sinus. The outer table of the skull was removed along the horizontal limb of the sinus backward from the knee to the extent of 1¾ inches, before there was any appreciable decrease in the amount of fibrino-purulent exudate that covered the sinus and adjacent dura. This exudate and thickening of the dura was so great that it was difficult to make out the margins of the sinus. The sinus was collapsed, as was also the emissary vein, which could be made out. The descending limb of the sinus was incised

from the ulcerated perforation below upward to the knee, and found empty. The horizontal limb of the sinus was gradually incised on a grooved director to the extent of 1½ inches. The walls were thick, collapsed, and seemed, as it were, glued together. A grooved director, followed by a curette, was passed backward and toward the torcular to the extent of 1½ inches further, without any flow of blood resulting. It was evident that the lateral sinus was obliterated, probably, as far as the torcular; and it was considered unwarrantable to open the sinus further in this direction. As the pus was in and about the descending part of the sinus, an effort was then made to obtain a flow from below. The sinus' outer wall was cut away and opened as near the jugular bulb as possible. A small curette was gently passed into the bulb end. No clots were found, but a welling up of blood followed the removal of the curette. The curette was again inserted and a better flow of blood followed, and was controlled with a gauze plug. It was not the strong gush that usually follows a return flow from below. It was evident that the lumen at the jugular bulb had been obliterated by the same pathologic changes found above, and been partially opened with a curette. Believing that there was no thrombus in the bulb, it was not considered necessary to ligate and to excise the jugular vein. Both ends of the sinus and the mastoid were packed with iodoform gauze, the posterior straight incision sutured completely and the curved incision left open.

Postoperative History.—The subsequent history was uneventful. The temperature was 101 the day after the operation, 100 on the following day and normal by the third day. No quinin was given after the operation. Investigation



showed that the blood examination for malaria, heretofore recorded, was made by a student and was likely unreliable, for there was no further complaint of chilly attacks, fever or sweats. The posterior skin incision over the sinus healed by primary union. The mastoid wound filled in gradually with firm scar tissue. The patient was up and dressed on the tenth day, left the hospital on the twentieth day and went to work at the end of five weeks. There was a slight mucus discharge from the ear thereafter. The small perforation did not heal. The drum membrane became dull white in color.

While I was ill the patient left the city for his home in the East. At that time, May 31, he still had a small funnel-shaped mastoid wound at the bottom of which was the aditus, from which there was scanty discharge. It was kept open in the hope of more quickly healing the middle ear and drum membrane. There was no bare bone and a retaining patch of gauze was worn to hold the loose dressing in the wound. A report from his physician six months later stated that there was still a small, dry sinus behind the ear and a scanty ear discharge. The patient wrote that his hearing had improved rapidly. A letter eleven months after operation stated that he had remained in good health in every way, but that a small sinus and scanty aural discharge had persisted, in spite of frequent curettements, and that a radical operation had been advised in order to heal this.

REMARKS.

A case similar to the second case which I have reported was described by Dr. J. E. Sheppard, at the New York Academy of Medicine, Nov, 21, 1898. In his case, the symptoms likewise simulated malaria and the sinus was opened and found thrombosed as far back as the torcular.

In the first case here reported I regret that I did not open the sinus at the first operation, in spite of its good appearance.

The temperature chart indicates that septic material was then entering the circulation.

I have been able to follow up twelve cases of sinus thrombosis—nine while house surgeon at the New York Eye and Ear Infirmary, and three in my own practice.

It was a striking fact that the thrombosis of the sinus in five patients who recovered was not diagnosed before operation, but discovered by purposely opening the sinus wall on account of its suspicious appearance. This experience is in accord with the statement made by Whiting in 1898, that "the diagnosis of sinus thrombosis in the first stage (thrombus not having undergone disintegration) is, with rare exceptions, consequent on operation for mastoiditis."

I have seen the sinus uncovered purposely or unintentionally 115 times in 198 consecutive mastoid operations, without any bad result. In 69 cases the sinus wall was found to be normal.

I have seen the sinus opened purposely or accidentally, 24 times in this series. In 12 cases thrombosis was demonstrated. In the remaining 12 cases, no harm resulted except in one case which terminated fatally from thrombosis. It is possible that this complication would have resulted, independent of the accident, as it was a badly inflamed sinus wall. The danger from delay in opening the sinus until symptoms of chills, fever and sweats appear, was shown in this series, for all of the seven patients who presented a history of these symptoms died. Many such patients, of course, do recover, but this experience emphasized the fact that the so-called cardinal symptoms of thrombosis are symptoms of a late and dangerous stage, namely, of septic disintegration. I believe that the tendency to terminate the mastoid operation in a case of long standing, or much mastoid destruction, without uncovering the sinus sufficiently to relieve one's mind of doubt as to its condition, is not in accord with good surgical judgment.

DISCUSSION.

DR. GEORGE F. COTT, Buffalo, said that these cases occur from time to time and are often overlooked by the general practitioners. The symptoms are often masked so that it is almost impossible to determine whether or not there is sinus thrombosis. When there is a discharging ear, a phlebitis or thrombus may be suspected; when, however, it occurs in other diseases, the practitioner's attention may not be called to it, because the symptoms may be completely masked. Sometimes in typhoid fever or some other zymotic disease there may be quite typical symptoms of sinus thrombosis that will be overlooked. In case there is no history of ear trouble, it is very readily overlooked. Sinus thrombosis may be caused not necessarily or directly by ear trouble and yet be due to that indirectly. For instance, in a case of chronic ear trouble from which the patient had recovered years ago, acute infectious sore throat may set up an inflammation of the bone, not necessarily affecting the middle ear, and in that way affecting the sinus and causing a thrombus to form without the septic symptoms. The otologist may cut down and mistake the thrombus for a pus sac or something else in the brain. In such cases it pays to explore; one may find some fluid or a little pus. Such patients almost invariably die from septic trouble. When the

phlebitis first begins, it depends on the extent of the infection from its source in the ear; if the disease is not checked in some way, by Nature or otherwise, the inflammation extends along the vein and the thrombus gradually forms. That thrombus may extend from the torcula herophili down to the bulb and possibly down the jugular vein. Dr. Cott has seen one that filled the sinus entirely from the torcular to the bulb. The patient had absolutely no symptoms but those of secondary suppuration of the middle ear, with some little irritating feeling and a slightly irregular temperature. Another condition of importance is that there may be phlebitis without the formation of a thrombus. It does not follow that one is justified in operating because this peculiar typical temperature is present, no matter whether there are three or four degrees difference in 24 hours or in 12 hours. Dr. Cott's experience is that it is not necessary to open the lateral sinus unless there are other symptoms present. Less than a week before going to Portland he did a radical operation on a little girl 7 years of age, and following the operation he watched the temperature, which is still quite typical of sinus thrombosis. He did not and does not intend to operate on that child. He turned the case over to another otologist with the intention of having him operate if the child showed other distinct symptoms. She sat up and ate and felt well in every way.

Dr. C. F. Welty, San Francisco, said that the picture drawn in most cases of sinus thrombosis is so characteristic that it is downright negligence not to make a diagnosis at once. Again, the diagnosis may be so complicated that one can not say with any degree of certainty what the pathologic lesions may be. By a process of elimination the physician arrives at conclusions as to probabilities, and in most instances makes a correct diagnosis. The case that was diagnosed typhoid fever, with a temperature varying from 99 to 104 and with discharge from the ear, gives almost certain evidence of sinus thrombosis, because it is very seldom that such variations come in typhoid, and they are quite characteristic of sinus thrombosis. To make the diagnosis absolutely complete, the sinus must be uncovered and it must be incised, because the thrombus may not be complete and fluid blood may be obtained by use of the puncture needle. The physician must judge from the amount of blood that flows from the incised sinus as to the presence or absence of a thrombus. Dr. Welty has seen several cases in which the thrombus was not demonstrable by the use of the needle, but by incision it became so apparent that there was no room for doubt. It must be remembered that the patients who are operated on early are those who have the best chance for recovery, and when a physician is dealing with life-saving measures he is justified in more radical procedures. In the second case of chills and fever a diagnosis was made of malaria associated with a suppurating ear. This picture is so characteristic that a specialist should not hesitate to open the sinus if malaria has been demonstrated by microscopic examination. It was found on more careful examination, however, that the microscopist had made a mistake, and necessarily a great deal of valuable time was lost. Dr. Welty has not seen bad results follow the incision of a healthy sinus, and declared that if the operative field is surgically clean no harm has been done and the physician has eliminated a possibility that might have cost the patient's life. In this connection Dr. Welty mentioned a new operation that has been perfected by Professor Grünert of Haile. He removes the whole of the venous channel from one end of the thrombus to the other. Dr. Welty saw four such operations, and the patients all recovered.

Dr. W. H. Roberts, Pasadena, Cal., said that to those who are in the habit of waiting for the cardinal symptoms of sinus thrombosis, namely, chills, fever and sweats, before opening the sinus, the stand taken by Dr. Hastings may seem a little radical, but in cases of sinus thrombosis it is necessary to be radical. It is a mistake for physicians to wait for these cardinal symptoms, which are really symptoms of disintegration of the clot and absorption of the septic material. Operation is distinctly called for in all long-standing mastoid cases. The sinus should be thoroughly uncovered and examined carefully and, if necessary, opened, under proper precautions, to see if there is a free return of blood from both ends. By doing this physicians certainly save more cases by far than they lose.

Dr. H. Stillson, Seattle, emphasized two personal equations. The first has reference to the operator and the other has reference to the patient. It seems to him that the personal equation of the operator has not been sufficiently dwelt on. It is a very easy matter to open a mastoid, but to know what one finds is another thing. It is perhaps a comparatively easy matter to open a sinus, but to open it in a most dexterous way and recognize what one sees without undue manipulation is another question. Dr. Stillson thinks the position taken will depend largely on the skill of the operator. If he is to operate as a barber or blacksmith would, Dr. Stillson would decidedly oppose his opening the sinus. If, however, he has the skill of Dench, who may go into almost any brain with comparative safety, then let him perform the operation on these cases. The personal equation of the patient should be considered. There are patients who do not stand any operation with safety. Since this operation of opening the brain is a very important one for the patient, the surgeon should see to it that the condition of the patient is such that he will best stand the operation. There are many questions to be taken into consideration when contemplating operation in these cases.

Dr. G. A. Leland, Boston, mentioned a case which he reported in 1897 to illustrate the cause of death in these cases. It was a case of sinus thrombosis, with the classical symptoms and with a white blood count of 50,000 to the cubic millimeter. At operation the sinus was opened and the clot cleaned out as far above and below as seemed justifiable; on the eighth day the whites were found to be 10,000. A stiffness of the neck occurred on the eleventh day with very little swelling behind the sternomastoid. Suddenly a leptomeningitis developed and death occurred in two days, the fifteenth day after the operation. In this case the autopsy showed that the clot had been cleared out very well, but that there was a collection of pus below the bulb in the jugular vein. The point Dr. Leland wished to make, which may throw light on the cause of death in some of these cases, is that there was a migration of the micro-organisms with consequent infection of the sinus on the other side of the torcular herophili. The right side being the one operated on, a small antemortem adherent clot was found in the left. If this patient had not died of leptomeningitis, there might doubtless have supervened a septic phlebitis or a pyemia from disintegration of the thrombus on the other side; so that in some of these cases, unless the surgeon can cut off the head and scrape out all the sinuses, Dr. Leland does not see how he can be sure that he will not have deaths. Even though one analyzes the symptoms to the uttermost limit, he may still be unable to save some patients. Dr. Leland mentioned another hospital case in which the patient was being treated for malaria by large doses of quinin. Consultation slips were sent to the throat, the second surgical, and to the aural services because of a marked swelling on the right side of the posterior pharyngeal wall. The two former diagnosticated deep cervical abscess, and transfer to the surgical side was ordered. Briefly, the findings were as follows: A boy, medium height, slim but well nourished, had suffered several years with right purulent otitis media with almost entire obsence of drum-head; lately with suppression of discharge followed by severe headache, chills, pyemic temperature fluctuations; the left shoulder and the right knee were red, swollen and tender, evidently the result of metastases. The outside of the neck was slightly swelled on the right, but on the pharyngeal wall there was a circumscribed tumor, longest in vertical diameter, which did not fluctuate. The diagnosis was obviously sinus thrombosis with embolism and epidural abscess originating in chronic otitic suppuration with involvement of the deep cervical vein. On further consultation operation was decided on. Dr. J. C. Munro ligated the internal jugular near the clavicle, posterior to the sternocleidomastoid attachment. The respiratory blood movements were very marked. Dr. Leland then opened the mastoid process and found the sinus blue, soft, glistening, perfectly normal in appearance, but much distended. Doubt in the minds of the medical men associated in the case began to develop into adverse criticism, felt if not voiced. Yet a small collection of sero-pus—the epidural abscess—was found inside the sinus, inside and posterior to the bulb, at the base of the skull down toward the foramen magnum.

No thrombosis of the lateral sinus could be made out, even down to the bulb, but there was a thrombosis or a phlebitis of some of the communicating veins, and possibly of the inferior petrosal sinus; this morbid process later extended up into the cavernous sinus and caused exophthalmos of the right eye with some involvement of the ocular nerves, and still later even slightly affected the left eye. No further operation was necessary. The patient recovered. Mural thrombi certainly may cause even more grave and far-reaching trouble than those completely occluding the vein. So that there is a great deal to be gained by studying all these little points and making observations as accurate as possible. Special attention should be directed to the number of white blood corpuscles. An important point is the difference in the percentage of the polymorphonuclear leucocytes. If there is a high proportion of polymorphonuclear leucocytes, there is pus in the circulation.

DR. JOHN F. BARNHILL, Indianapolis, declared that in a discussion of this kind, where there enters so much of the experience-meeting character, there is a good chance for presenting the discouraging side of operative work, and the possibility, therefore, of hindering its legitimate progress, yet it must be remembered that otologists have appropriated to themselves a field of surgery that is most difficult. It is to be expected that many of our operative cases will result fatally because of their serious and otherwise incurable nature. There are so many brilliant cases of cure as the result of definitely applied surgical skill that otologists ought at least to take from it a good deal of encouragement. Later they will doubtless have much better reports to make. The point as to where these blood clots may form is worthy of emphasis. The petrosal veins may be thrombosed just as the larger veins. A thrombus may be found in the sinus extending as far as the knee, and yet such thrombus does not constitute the entire trouble. The surgeon is not always permitted to examine fatal cases after death, and, therefore, one does not always know whether he has gone far enough in the operative work. Results must depend on accurate diagnosis, and otologists should in no case fail to go to the limit of their skill in diagnostic efforts. Any aid in making a diagnosis will aid in giving better future statistics. In this connection it might also be stated that physicians are entirely too ready to attribute certain symptoms, or groups of symptoms, to malaria, rheumatism or la grippe. The otologist and rhinologist who thoroughly and skillfully investigate the condition of the open sinuses that lie adjacent to the ear and nose, and practically surround the base of the skull, will frequently find that the symptoms attributed to those diseases can be proved to be caused by sinus suppuration and absorption. The term la grippe has been so engrafted on the mind of the profession that any patient who has some chilly sensations, aching muscles and a tired feeling is said to have la grippe. By most careful investigation of cases, otologists may improve their diagnostic abilities, and through better diagnosis will most certainly result a more hopeful prognosis of lateral sinus and other intracranial ear complications.

DR. ROBERT C. MYLES, New York, said that here is a case that will probably puzzle the supreme court of the United States to determine, and there is no attorney for the defense. No one is interested in the prosecution, except the public, and they will not let physicians help them by making an autopsy. The insurance companies have probably twenty cases of brain abscess to-day where they had one ten years ago. The cases are more frequently recognized at the present time. Dr. Myles has had patients who have laid moribund for weeks with phlebitis, and they are well to-day; patients with obliterating conditions of the veins and sepsis frequently recover. It is rather common in the lower limbs to have a phlebitis from which the patient will recover. It is a question whether a blood clot that is not septic causes so much trouble. Dr. Myles is strongly in favor of operating when there is direct evidence calling for operation; but the brain should not be torn to pieces *ad libitum* on a mere suspicion or guess. His attention has been called to so many cases in which an exploratory incision of the brain has been followed by death that it is evident that surgeons should be more careful.

DR. HILL HASTINGS said that otologists should receive encouragement from the fact that it is only about 18 years since Lane, of England, cured a patient with sinus thrombosis by operation. The case mentioned by Dr. Richards is extremely interesting. The fact that he could not get an autopsy makes the diagnosis uncertain. It was one of those confusing cases that some of the best men worry over. Dr. Cott's case of extensive thrombosis shows that the "cardinal symptoms" are rather unreliable. Dr. Hastings has not seen a case like Dr. Leland's; it was a striking case and teaches much. The problem that confronts otologists in these cases is much like that of appendicitis some eight or ten years ago. A large number of the patients he has seen operated on for mastoid disease should have been operated on earlier. He thinks that is due to the reluctance of the patients and the absence of the swelling and the redness that seem to be regarded as the indications for the opening of the mastoid. When an early mastoid operation comes into vogue it is probably safe to predict that there will not be so many cases of sinus thrombosis; until then there will always be cases that may puzzle physicians a great deal. There are two classes of these cases. In one class belong those cases in which one is reasonably certain, on inspecting the sinus, whether it is thrombosed or not. That class contains the larger number of cases, but there always will be the second class of cases in which the physician will be uncertain whether or not there is a thrombus in the sinus, judging from the appearances. When the physician leaves such cases without opening the suspicious sinus he is uncertain whether he has done the best for the patient. All otologists have seen many mastoids of extensive involvement operated on, but in which the condition of the sinus was not determined, and death from pyemia follows. Many more of these cases in which thrombosis undoubtedly existed at the time of operation are not reported. Dr. Hastings, therefore, is decidedly in favor of opening the sinus in such doubtful cases. The incision should be done under proper precautions. It should be opened with a clean cut with the knife instead of using a needle for the purpose of diagnosis. In some cases sepsis has terminated in recovery without operation on the sinus; but such cases are conceded to be in the minority. He has seen several patients die from thrombosis who he is certain would have had good chances to get well if the sinus had been opened a few days earlier. Whiting has aptly stated that "the time for operation is in the first stage of sinus thrombosis" before the septic disintegration of the clot occurs; and he follows that up with the rather discouraging statement that we can not tell without operation when we have to deal with the first stage of sinus thrombosis. So we must uncover the sinus in bad cases and determine whether it is thrombosed. If in doubt, Dr. Hastings believes it is wise to open it and not to trust to luck. In reply to a question, he said that one can not expect in every case to decide by looking at the sinus; although the cases are comparatively few in which the appearance of the sinus would be as misleading as in the first case mentioned. The "feel" of the sinus, the evidence from the thickness of the wall, and the presence of purulent granulations as a rule help in the diagnosis. He does not believe that any one can tell absolutely without opening the sinus.

THE CARE OF INFANTS IN PUBLIC INSTITUTIONS.*

H. M. McCLANAHAN, M.D.
OMAHA.

It has long been recognized that the care of infants in public institutions presents peculiar difficulties. The mortality is greater among these, in any given disease, than in private practice. The reason why the institution infant has less resisting power is, no doubt, because of its impaired nutrition; and faulty nutrition is probably the result of poor food, bad air and lack of maternal care. It can not fail to have been noticed by all doing hospital work that all infections are more severe

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among numbers, as in a ward, than among isolated individuals.

The observations on which this paper is based were made in the Child's Saving Institution, Omaha, Neb., and covered a period of four years. This is an eleemosynary institution, supported by public-spirited citizens. It receives infants and children for care and adoption. During the years of 1902-3 the nursery was not in charge of a trained nurse. The women were kind, and did the best they could, but during the summer months of those two years the mortality was unduly large. At the close of 1903 the board of directors gave the superintendent authority to employ a trained nurse to have charge of the infants' ward. I was given absolute authority to make and enforce rules governing the care and feeding of the infants. The death rates for the years 1903-4, from preventable diseases, were very much less than for the two preceding years. This lessened death rate was due wholly, I believe, to the employment of skilled help.

My purpose in presenting this brief paper to the Section is to demonstrate the importance of prevention of disease, rather than to add anything new in the way of treatment. In this connection I wish to make a plea for greater authority for the consulting physician in the internal management of hospitals, particularly for children. He should have knowledge and control of the milk supply. He should have authority to discharge nurses when proven incompetent. The reports which follow are not nearly as complete as they should have been, or as they will be in the future.

During the year 1901, 62 infants were cared for. There were 11 deaths during the year, and of this number 10 died from diarrheal diseases during the summer months. During the year 1902 there were 106 infants cared for. There were 32 deaths in that year. Of that number 26 died during the summer months from diarrheal diseases. During the year 1903 the total number of infants cared for was 92, with 15 deaths. In this year there were no deaths in July, August or September. Almost the entire mortality was in the months of January, March, April and May. Seven deaths were due to pneumonia, four to congenital syphilis, one to purpura, one to congenital heart disease, and in the two others the cause is not given. In the year 1904, 110 babies were cared for, with 15 deaths during the year. Nine of these were due to gastrointestinal diseases, but of the nine dying from this cause eight were admitted already sick with some form of diarrhea, five of the eight dying within twenty-four hours after admission. Of the infants in the institution June 1, 1904, but one developed any intestinal trouble during the summer. I make this explanation in justice to the institution. Of the six other deaths during the year, two were due to pneumonia, two to congenital syphilis and in the other cases no cause was given. The prevention of diarrheal diseases during the past two years was due, in my opinion, to employment of skilled nurses and the rigid enforcement of certain rules which will be given later in this paper.

The infants' ward is a room 29½ feet long, 13½ feet wide, 8¾ feet high, and contains 3,482 cubic feet. As there are never less than twenty-five babies in the ward, each baby has 142 cubic feet of air space. When there are thirty babies in the ward, as is often the case, then each infant has only 110 cubic feet. As we could neither decrease the number of infants nor increase the size of the room, we have been forced to make the best of the situation, and the following expedient has been adopted: There is another ward in the building of the same size. This is used as a sleeping room for the older children. The children are removed from this room at 7 a. m., the bedding is changed, all the windows are opened, and then about 10 o'clock the infants are taken to this room. This gives an opportunity to ventilate thoroughly the infants' ward. During the summer season we have a large tent out on the lawn, open at either end, and the infants are kept here for several hours a day. Twice a week the nursery is fumigated with formaldehyd candles. The floors are wiped daily and the walls brushed down.

Another important matter with me was the care and disposal of soiled napkins, and during the last two years the following method has been adopted. Two five-gallon galvanized iron buckets, with closely fitting lids, are provided. These contain a solution composed of four ounces of common salt and two ounces of sulphate of zinc to each gallon of water. One is used for wet napkins and the other for soiled napkins. The napkins are deposited in this solution as soon as removed, and the buckets are taken to the laundry and emptied once or twice a day. The nurse is not permitted under any circumstances to leave a soiled napkin on the floor. As soon as it is removed it is taken at once and deposited in the bucket. After changing the napkin and before handling another baby or bottle, each nurse washes and then disinfects her hands in a 1 to 3,000 solution of bichlorate of mercury. This rule is rigidly enforced. I am satisfied that in an infants' ward there is more danger from this source of gastrointestinal infections than from the bottles or the milk; that is, a napkin containing the ordinary colon bacillus from a healthy child by careless handling may be the means of infecting another infant, and thereby inducing an intestinal infection.

All our infants are fed on modified milk. During the last two years we have not had a package of infant food in the house. We procure fresh milk in glass bottles, which is kept in porcelain-lined ice chests, at a temperature of 40 degrees. We also procure 20 per cent. cream. During the summer months all the food is Pasteurized. It is a standing rule that when infants receive Pasteurized food they are to receive orange juice once a day. Another rule is that one nurse prepares all the food for a given time. If there is any error, we know where to place the blame. All feeding bottles are labeled with the name of the infant. The bottles are washed with hot soapsuds once a day and then thoroughly rinsed in an alkaline solution. The nipples are thoroughly rinsed after each feeding, and are kept in a boric-acid solution.

Another rule that I have found of great value is this: An infant as soon as it is observed to be sick, whether it be a cough, a rise in temperature or offensive bowel movements, is at once isolated. In this way during the last year we have been able to prevent the spread of any contagious disease through the nursery. During the summer the head nurse is given authority to stop the milk of any baby having an offensive movement. Such an infant is given a dose of castor oil and fed on barley water until it can be examined by the physician.

DISCUSSION.

Dr. John C. Cook, Chicago, said that the education of the nurses for the care of the children is one of the most important, and, perhaps, one of the most neglected subjects in the training schools of the United States. In an institution in which he has a service, cultures from the mouths of children were made and the colon bacillus was found in so many that they stopped the nurses who were giving medicine and food from removing napkins, and ordered that a set of nurse girls take

charge of the napkins and cleanse the babies. Unless one has done some bacteriologic work in this line he has no conception of the damage done babies by the unclean hands of nurses. There is no one thing that physicians as a class neglect so much as they do instruction of mothers and nurses. Not only would a large number of the bowel troubles of children be prevented, but many of the other diseases, if this instruction were carried out. Much good would be done to the general public and to the nursing babies.

DR. ARTHUR W. FAIRBANKS, Boston, said that in his city, in a small hospital where they have a large number of the severest form of bowel infection, and formerly a number of cases of apparent reinfection, they have studied the problem and concluded that the nurses' hands have something to do with it. They have instituted a procedure of thorough cleansing of the hands of the nurses, even in changing the napkins of different children, and they have noticed since this has been put into effect a decided diminution in the reinfections. Coincident with this cleansing of the hands they have paid attention to the exclusion of flies, and the results have been most excellent. The nurses who change the napkins do not have anything directly to do with the feeding.

DR. ALICE M. SMITH, Tacoma, Wash., finds that many mothers and nurses will put things into their own mouths and then transfer them to the mouths of the children; for instance, the nipple of the bottle is put into the mother's mouth and then into the child's—a most pernicious habit. The fumigation of the rooms and the washing of the floors where children are congregated can not be too much insisted on.

DR. KATE LINDSAY, Boulder, Colo., thinks that there is only one solution of the problem and that is in thorough education. She has found it impossible to get mothers to follow instruction, and her only hope is in educating a nurse and having her go from house to house where children are ill and educate the mother by doing the work before her. Nurses ought to be specially instructed for that purpose.

DR. C. F. WAHRER, Fort Madison, Iowa, said that physicians should be almost pedantic in teaching the rules of antisepsis and cleanliness. He was recently called to attend a case of abortion in a family whose physician had died during the attendance and he was astonished to find in that isolated farmhouse that they had prepared sterilized water protected. The physician who had preceded Dr. Wahrer had done his duty well. Dr. Wahrer said that he has no sympathy with those men who claim that antiseptic measures can only be carried out in well-appointed hospitals and are impracticable in country districts. He has spent very little time in metropolitan hospitals; he has been mostly in small towns and in country practice, and he has found antisepsis quite practical wherever soap and boiling water can be obtained.

DR. H. M. MCCLANAHAN declared that the point which impressed him in taking charge of an institution was the probability of infection of children from nurses in changing napkins, and some bacteriologic work was done by a young physician there which showed that there was no question as to the source of infection. It is well to remember that there are other sources of infection than that of impure milk. The thorough ventilation of the rooms which was systematically carried out he feels was very important. They did not use any of the patent milk foods and found no necessity for them. Sometimes in children from two days to six weeks of age it was found that the simple whey mixtures, with the addition of cream, were preferable to modified milk.

English as She Is Wrote.—The liberties taken with rhetoric under the banner of science are a source of never ending amazement. This license is particularly glaring in the splitting up of sentences. It appears to be assumed that a succession of adjectives and nouns without prepositions, conjunctions or verbs, is sufficient to convey an idea, and that the precious time of physicians need not be wasted in the reading of a complete sentence. Instances of this are so numerous, especially in reports of cases, that illustrations are not needed. Punctuation is fast becoming a lost art.—*Albany Medical Annals.*

A FOURTH DETAILED REPORT OF THE SUPERIOR AND LASTING RESULTS OF MY BI-INGUINAL OPERATION FOR SIMPLE AND COMPLICATED ASEPTIC RETROVERSION OF THE UTERUS.*

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CHICAGO.

Since Professor Kossmann[1] of Berlin has designated this operation by my name in a paper before the Berlin Medical Society, I may be excused for naming it so also, although I have so far applied to it its anatomic name only, notwithstanding that the combination of an extended Alexander operation, with bi-inguinal celiotomy and the Bassini hernia technic in closing the wounds with anchorage of the round ligaments to Poupart's ligaments, was made by me completely and solely in 1893, and performed in at least 75 cases, of which 47 were published, before I learned that any one else also was doing it.

This operation owes its origin and persistent growth, in the face of much opposition, to the mandates of several stern anatomic facts: (1) The round ligaments of the uterus are the only structures connected with it that, as a part of it, are composed sufficiently of nonstriated muscular fibers to undergo growth with it during gestation, and involution also after labor. Striated muscle, no matter from where it is brought, can not be expected to do that; and certainly no other soft tissues will do anything of this kind, but will stretch, at best, during gestation and frequently without this, and will remain long and useless.

(2) The round ligaments of the uterus taper from within outward, so much so that their uterine origins are at least six times as strong as they are at their extraperitoneal, but intra-abdominal portions, which compose their most vulnerable parts.

(3) These weak parts that call for reinforcement or elimination, however, are readily accessible only via the inguinal canals from without, and not advantageously by any vaginal or ventral incision. Accordingly, the operations which shorten the ligaments by these routes, especially those of the Mann, Ries,[2] and Webster[3]-Baldy[4] types, are anatomically wrong, because they shorten them by doubling up their thick, accessible ends and leave the outer feeble and inaccessible portions as weak and liable to stretch as before. Far preferable to these are a numerous class of intramural transplantations of the round ligaments, most of them procedures advocated during recent years, respectively, by Ferguson,[5] Gilliam,[6] G. H. Nobel,[7] H. T. Byford,[8] F. F. Simpson,[9] E. E. Montgomery,[10] McGannon,[11] Sperling[12]

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* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Berlin klin. Wochft., 1904, No. 25.
2. Ries, E. J.: THE JOURNAL A. M. A., 1901, vol. xxxvii, p. 424.
3. Webster, J. C.: THE JOURNAL A. M. A., 1901, vol. xxxvii, p. 913.
4. Baldy, J. M.: Amer. Jour. Obstet., May, 1902, p. 650.
5. Ferguson, A. H.: Amer. Gynecol., December, 1902.
6. Gilliam, D. T.: Amer. Jour. Obstet., March, 1900.
7. Nobel, G. H.: Amer. Jour. Obstet., 1903, vol. xlvii, p. 174.
8. Byford, H., Jr.: THE JOURNAL A. M. A., 1903, vol. xl, p. 1190.
9. Simpson, F. F.: Amer. Gynecol., December, 1902.
10. Montgomery, E. E.: Therapeutic Gaz., 1904, 3 s., 20, p. 371.
11. McGannon: Amer. Jour. Surg. and Gyn., h. p. 147.
12. Sperling, Central. f. Gyn., 1904, p. 1033.

and C. H. Barrett.[13] In these commendable operations the round ligaments are separated intra-abdominally from the broad ligaments to a sufficient extent and are then drawn into the median ventral incision or into stab wounds near it and fastened, or with a suitable curved and slender forceps they are passed subperitoneally forward and around the bladder to the internal abdominal rings and stitched fast there to the muscular part of the abdominal wall. Or they are drawn, with a similar forceps, beneath the peritoneum or between muscular layers at or near the internal rings and from there into the median ventral incision or into the ends of a transverse fascial (Pfannenstiel) incision, and fastened there. All these kindred methods of transplanting the round ligaments into the abdominal wall are anatomically consistent: (1) Because they discard the useless outer portions of the round ligaments and place their inner strong portions to do the work, either of suspending the uterus or holding it forward, or partly both, and (2) because all of them, except the Ferguson and Gilliam methods, avoid making transperitoneal bands or bridges.

During the last several years I have treated more patients by one of these methods than by my own operation, for the following reasons: (1) Simple, movable retroversions with healthy appendages are, by me, largely treated by pessaries with regular monthly or bimonthly revision and adjustment; (2) in the complicated cases the majority of the patients either have active infectious elements, or strong suspicions of such, still remaining, so that they demand preferably a median ventral section with sight to supplement touch (which I have always chosen for this class); or they have some other disorder like a chronic appendicitis, a widened linea alba, or a ventral hernia that should be eliminated also, or an incidental palpation of a supicious kidney, gall bladder, stomach or bile ducts, determines the choice of a ventral incision; (3) during the very systematic and searching reviews in which my surgically treated patients with retroversion together with the results of pelvic peritonitis have been afterward studied by me to find out the real merits and demerits of my bi-inguinal work, during the last ten years, I have learned incidentally that in the cases of marked general pelvic peritonitis with bilateral salpingo-oöphoritis the infectious elements will frequently die out or become innocent; but quite firm and general adhesions of the uterus and particularly of the adnexæ remain, with follicular, cystic, or sclerotic ovaries and closed and deformed tubes. By liberation of all adhesions, by removing the worst parts of the adnexæ and reconstructing the remainder, chiefly by salpingostomy and resection of ovaries and by securing for the uterus a favorable position and also a better condition by an effective curettement and amputation of a pathologic cervix, when needed, these patients, with few exceptions, can be made well, with or without a subsequent course of general medical treatment, combined sometimes with local massage and a galvanic current, as, for instance, for an old metritis—but they rarely become pregnant.

Before I knew this I treated this class of patients mostly by my own operation, in view of the supposed capacity for conception that they might retain. The Alexander operation is pre-eminently the one to be chosen for fruitful women; and the urgency of its indication is directly proportionate to the reproductive capacity of the patient. This operation stands in the vanguard, practically without a competitor, in the vast amount of anatomic and clinical evidence which it has furnished that it not merely supplies to the uterus favorable conditions for conception and increases its productive capacity, but that it is also able to cope with its critical metamorphoses during parturition and the period of involution. But when this highest function of the uterus has been lost, some one of the above-mentioned methods of utilizing the thick ends of the round ligaments through a ventral incision is good enough to correct the displacement and better for the other indications.

It is the prevailing sterility among this class of patients who are otherwise restored to fair or perfect health by conservative surgery, that induces me not to continue to treat them via the dilated inguinal rings. The surgical indications in these cases of retrodisplacement with adhesions and deformed appendages can be very safely and successfully, although not so conveniently, carried out in that manner, provided that active infectious elements are found no longer present by repeated, careful bimanual examination with properly educated fingers. That this is true I have demonstrated on at least one hundred of such patients with adhesions and other marked complications in the adnexæ who were treated by that method with a mortality rate of 1.5 per cent., with no hernia following, with at least 99 per cent. of anatomic cures (of position of the organs) and 87 per cent. of subjective cures, aside from the predominating sterility. The objection which some men raise to the matter of separating adhesions of the uterus and adnexæ without sight is hardly valid, nor well taken, because these same adhesions in such cases they themselves would liberate usually through a ventral incision of two or three inches, which would usually preclude sight of the adhesions deep down in the small pelvis beneath and around a retroverted uterus. Only after the adhesions have been severed and the parts have been separated is sight really admitted, to assist in repairing some possible damage, it is true, but scarcely to prevent it.

While I concede that the additional care, labor and inconvenience of bi-inguinal celiotomy are misplaced when offered up in patients with displacement of the uterus who retain merely a nominal reproductive capacity, or none at all—because they will never be in a position to realize its superior benefits—I must, however, contend more earnestly than ever, that bi-inguinal celiotomy, on account of its completeness and thoroughness, should be made to supplant the old superficial, extraperitoneal Alexander operation in all cases, at least to the extent of a careful and intelligent digital exploration of the uterus and adnexæ through both inguinal rings, in order that certain peculiar conditions and otherwise undiscoverable complications like the following may be successfully dealt with, even in the seemingly simple cases:

First: Adhesions of the ovary and abdominal end of the tube are of much more frequent occurrence than of the uterus itself, because, in their vicinity, infections enter the peritoneal cavity first through its most frequent channel, the endometrium, and the tubes. Adhesions of these small structures are very difficult to discover and are often not suspected when the uterus is free and reducible. They were formed on these adnexæ in their descended position, to which they sank in consequence of the retroversion of the uterus. When the uterus is brought into anteversion these, its wings,

13. Barrett, C. W.: Proc. Chicago Med. Soc., June 21, 1905.

Patient.	Symptoms.	Anatomical Diagnosis at operation.	Additional to bi-inguinal section and date.	Result and convalescence.	Postoperative condition.
1. Mrs. D. F., aged 34 years; iv-para and two abortions; housewife.	Extremely nervous and anemic; menorrhagia and dysmenorrhea; very dyspeptic, diffuse pelvic pains.	Extreme retroversion, movable, descended adherent left ovary; cervix with deep laceration and ulceration, with many Naboth follicles.	Curettement; amputation of cervix; resection of both ovaries. Jan. 11, 1902.	Patient died 27 hours after operation, of cerebral embolism.	Left round ligament was traced from the broad ligament outward. Both round ligaments very small; for twenty-six hours after operation patient's condition was very satisfactory, pulse of from 68 to 100, and temperature from 99.2 to 101.2 by rectum; general condition very good, aside from nervousness. Patient suddenly became cyanosed; failure of respiration and death followed within twenty minutes.
2. Mrs. A. R. C., aged 34; multipara; conductor's wife.	Constant pain in left ovary, backache; much headache, almost unable to walk.	Movable retroversion, metritis, endometritis; pathologic cervix; lacerated perineum, prolapse of left ovary and of vaginal walls.	Curettement; amputated cervix; perineorrhaphy; resection of both ovaries. Feb. 1, 1902.	Almost afebrile course, primary union of inguinal wounds.	Examination June 5, 1905. (Dr. R. L. James). Uterus was anteverted, but sacrouterine ligaments elongated, permitting cervix to slide down, thus taxing round ligaments above. Patient is very corpulent, and has slight descensus of vaginal wall, but is quite well.
3. Mrs. W. B. B., aged 21; 0 para; mechanic's wife.	Anemic; very nervous and hysterical; much heart palpitation, and dyspnea, dysmenorrhea and neurasthenia; marked languor and backache.	Mobile, extremely retroverted uterus; catarrhal cervix; descended left ovary with numerous large follicle cysts.	Curettement, resection left ovary, exploratory incision and suture of right ovary. Feb. 3, 1902.	Afebrile, very comfortable course; complete primary union.	Examination, May 12, 1905. Patient was feeble and nervous for a year after operation, then she became pregnant; normal birth of large child a year ago, with puerperal fever five weeks. Position and condition of organs are now ideal, aside from a little cervical catarrh and occasional backache; nurses big baby and does housework.
4. Mrs. C. S., aged 31, iv-para; laborer's wife.	Fairly nourished but anemic; severe general pains and backache; headache; dyspnea and precordial distress.	Severely pathologic cervix, with adenoma of anterior lip; very large metritic uterus, in extreme but mobile retroversion; descended cystic very tender left ovary; lacerated perineum.	Curettement; high amputation of cervix; intrapelvic, infravaginal perineorrhaphy; resection of one ovary. Feb. 10, 1902.	Tweve hours after operation patient very restless almost maniacal, with pulse 106, temp. 103; afterward normal; primary union.	Examination, June 9, 1905. Position of appendages and uterus perfectly normal. Former disabilities all gone, works regularly as scrubwoman, says "I am real well."
5. Mrs. H. B., aged 32; seamstress; widow.	Back and side aches and severe dysmenorrhea.	Extreme retroversio-flexion, fixed by cohesion; endometritis, and descended cystic left ovary.	Curettement, resection of left ovary. Feb. 4, 1902.	Smooth convalescence primary union.	Report by intimate friend that patient moved away six months ago, was then, and is now, in very good health.
6. Mrs. E. M. W., aged 43, multipara; saloonkeeper's wife.	Constant pains in side and back, headaches; palpitation; intercostal neuralgia; excessive and painful menses.	Metritic, retroverted mobile uterus, severely pathologic cervix lacerated and relaxed pelvic floor and perineum; double femoral hernia; right floating kidney; hemorrhoids.	Curettement, amputation of cervix; perineorrhaphy; 3 hemorrhoids removed by cautery; radical operation for bilateral femoral (omental) hernia, in conjunction with the bi-inguinal operation. March 1, 1902.	Complete primary union very prompt recovery.	Examination, June 7, 1905. Perfect position and condition of all organs, normal and painless menses; good, robust health, and thinks examination hardly needed.
7. Miss M. W., aged 21; virgin; farmer's daughter.	Disabling severe dysmenorrhea; constant backache; leucorrhea; dyspepsia.	Mobile retroversion and endometritis; close cervical canal; cystic right ovary; very slender right ligaments.	Curettement, resection of right ovary; left round ligament traced from broad ligament outward. March 1, 1902.	Complete primary union; nearly afebrile course.	Examination, June 3, 1905. Married, normal gestation ended six months ago; uterus now in ideal anteversion, and good involution. She has no pelvic or other symptoms aside from profuse menses without pain. She is in good vigorous health and nurses baby.
8. Miss A. P., aged 26, domestic, single, 1-para.	Disabling pain in right side of pelvis and groin; right intercostal neuralgia, backache, leucorrhea, dyspepsia, constipation.	Anteflexed but retroverted and retracted mobile uterus; endometritis, erosion of os; right tube much enlarged, and occluded by ovary with follicle cysts, both markedly adherent.	Curettement, resection of left ovary, removal of right adherent tubo-ovarian conglomerate. March 25, 1902.	Primary union; normal convalescence aside from temperature 102, for a few days.	Examination, May 11, 1905. Anatomic and functional status is normal; no complaint, aside from sterility so far; has been married two years.
9. Miss M. W., aged 16½, domestic; virgin; very large girl; menses at 12 years.	Constant disabling left-sided pain and backache; leucorrhea, menorrhagia and metrorrhagia.	Anteflexed but retroverted and retroponated uterus; catarrhal cervix; left ovary large with follicle cysts.	Curettement, resection of both ovaries; late superficial suppuration of one wound; severe ether (inhalation) bronchitis, with pulse 130, temperature 102.5, respiration 30, as maximum for three days' pain in chest.	Convalescence prolonged by burns of legs from hot water bags.	Examination, May 23, 1905. Normal position of all organs. Was well until a year ago; catarrhal endometritis evidently since then, with excessive and painful menses. She is working regularly as domestic, has severe nasopharyngeal catarrh.
10. Mrs. C. W.; v-para; laborer's wife.	Anemic, poorly nourished woman; constant pain right side and back; dyspeptic, very nervous, dysmenorrhea.	Metritic retroverted uterus; mobile pathologic cervix; both ovaries adherent; right one cystic; right kidney descended.	Curettement, amputation of cervix; removal of right ovary and tube; resection of left ovary. April 14, 1902.	Comfortable convalescence; complete primary union.	Examination, June 15, 1905. Uterus and ovary in excellent position. She is in normal condition also until recent gonorrheal (?) infection. She now has endometritis, and pain in ovary, but does washing and housework.
11. Mrs. N. O. H., aged 39; iv-para and 6 abortions; tailor's wife.	Large, flabby, anemic woman, poorly nourished; intense backache, dysmenorrhea, dyspepsia, nervousness and headaches.	Metritic, retroverted, adherent uterus; ovaries both cystic and adherent; lacerated perineum.	Curettement, perineorrhaphy; removal of right ovary, resection of left ovary. May 1, 1902.	Very smooth convalescence and primary union complete.	Examination, Sept. 10, 1904. Position and condition of uterus good; now in good health. During the first eight months tincture of iodin was applied to endometrium several times, and galvanic current to ovary more frequently; medical treatment, for renal insufficiency and rheumatism.

12. Mrs. T. S. M., aged 32; i-para; housewife.	Intense pain in back and left side; dysmenorrhea, dyspepsia, constipation.	Uterus broadly adherent; severe endometritis; firm adhesions of both tubes and ovaries, the former closed.	Curettement; freeing adhesions throughout; resection of both ovaries; right salpingostomy. May 20, 1902.	Primary union; normal convalescence.	Examination, June 13, 1905. Position and condition of all organs normal, aside from some tenderness of fundus. She has backache sometimes; menses normal; she does housework. Sterile so far.
13. Miss M. B., aged 25; virgin; seamstress.	Right-sided pain constantly; severe disabling dysmenorrhea, during entire period; leucorrhea since puberty.	Anteflexed retroverted and descended metritic uterus, mobile; patulous cervical canal; cirrhotic right and cystic left ovary prolapsed.	Curettement; little resection of left ovary; extensive resection of right ovary. May 24, 1902.	Primary union; normal convalescence.	Examination, May 15, 1905. Anatomic condition and position of organs good, but has tenderness of right ovary; former disabling backache, etc., all gone. She has worked almost constantly as seamstress during the last two years.
14. Mrs. R. D. L., aged 21; 0-para; one abortion; office attendant.	Large robust woman, constant disabling pain in left hip and side; dysmenorrhea and menorrhagia; dyspepsia and extreme nervousness.	Large retroverted mobile uterus; endometritis; left large cystic ovary badly descended.	Curettement, resection and suspension of left ovary. June 4, 1902.	Primary union; nearly afebrile and comfortable convalescence.	Examination, Dec. 15, 1904. Uterus and appendages in good position and fair condition. She has required medical treatment for rheumatism, and at times local galvanism to left ovary for a year, otherwise she is robust and an efficient office manager.
15. Mrs. W. T., aged 30; 0-para, one abortion; tailor's wife.	Strong plethoric woman; constant back and left-side ache, dysmenorrhea; sterility chief complaint.	Metritic uterus, in adherent retroversion; large left cystic ovary; descended and adherent, relaxed perineum.	Curettement; perineorrhaphy; resection of left ovary; July 26, 1902.	Smooth convalescence primary union throughout.	Examination, May 12, 1905. Had good health directly after operation; became pregnant in nine months; normal gestation and labor, normal condition and position of organs two months later; she is now pregnant again six months and in "too good health."
16. Miss A. C. W., aged 30; virgin; bookkeeper.	Constant right-sided pain; backache, dyspepsia, severe dysmenorrhea.	Large uterus, in marked retroversion, flexion, mobile; endometritis; descended left ovary; floating right kidney.	Right nephrorrhaphy; curettement; resection of both ovaries; Aug. 4, 1902.	Nearly afebrile, quite comfortable course; complete primary union of wounds.	Examination, June 18, 1904. Uterus anteverted, but also anteponated, from relaxation of sacrouterine ligaments in normal condition. Right ovary now quite painless, after six months' treatment by galvanism; she has some dysmenorrhea, otherwise is well and holds important office position.
17. Mrs. W. H. B., aged 25; i-para; housewife.	Flabby adipose woman, marked dysmenorrhea; constant backache, right-sided pain; dyspepsia and palpitation.	Extreme retroversion; uterus mobile, endometritis; ovaries descended; right one large with follicle cysts; relaxed pelvic floor.	Curettement; perineorrhaphy, resection of right ovary. Aug. 15, 1902.	Complete primary union, normal course.	Examination (Dr. Barnard), May 22, 1905. Normal position and condition of all organs; painless menses; perfectly well, and does full domestic duty.
18. Miss R. G., aged 21; virgin; nurse.	Persistent left ovary pain; backache; dyspepsia, dysmenorrhea, menorrhagia, constipation.	Mobile retroversion; fungoid endometritis; cystic left ovary.	Curettement; resection of left ovary. Aug. 15, 1902.	Complete primary union afebrile, comfortable convalescence.	Examination, June 26, 1905. Position and condition of organs ideally good; menses painless; no pelvic symptoms; robust health, great gain in weight; married two and a half years.
19. Miss M. N., aged 28; virgin; farmer's daughter.	Constant left-sided pain; extremely severe dysmenorrhea, with hysterical paroxysms.	Extreme retroflexion; uterus mobile; large descended, tender left ovary; right ovary less so; long, hard catarrhal cervix; endometritis.	Curettement; internal os constricted, wide dilatation of same; resection of ovaries. Sept. 25, 1902.	Almost afebrile, comfortable course; primary union.	Examination, Sept. 19, 1903. Fundus uteri well to front, but cervix too far anteriorly, owing to too much elongation of sacro-uterine ligaments; she also has marked bearing down discomfort still; right ovary cystic; now ventral section, and removal of right ovary and tube, and appendix, round ligaments, suspension of uterus.
20. Mrs. F. M., aged 37; ii-para, one abortion; musician's wife.	Anemic, poorly nourished, woman; constant left-sided pain; marked dysmenorrhea; backache, leucorrhea, dyspepsia.	Retroverted, adherent uterus, endometritis, indurated surface after former trachelorrhaphy; cystic and cirrhotic ovaries; buried in adhesions; lacerated perineum. (Dr. Zinke thought he would have removed left ovary.) Sept. 25, 1902.	Curettement; perineorrhaphy, liberating of all parts; suspension of right ovary and tube; resection of left ovary.	Nearly afebrile course primary union.	Examination, June 15, 1905. Normal position and condition of uterus, tenderness and occasional pain from ovaries; she does all her housework.
21. Mrs. F. K., aged 36; ii-para, one abortion; housewife.	Nervous, emaciated woman; constant left-sided pain, general pelvic aches; menorrhagia and gastric pain.	Large metritic uterus, retroverted, mobile; pathologic cervix; endometritis; adherent right ovary and tube.	Curettement, amputation of cervix, liberation and resection of right ovary; removal of left tube and ovary by electric thermocautery. Sept. 29, 1902.	Some temperature; much nervous disturbance primary union.	Examination, Nov. 1, 1903. Normal position of uterus and ovary; has required several strong intrauterine iodin cauterizations for recurring hemorrhagic endometritis; good position of organs, but complains still of backache, dysmenorrhea, and thoracic neuralgia; she is a pronounced neurasthenic.
22. Mrs. H. W. H., aged 30; multipara; working housewife.	Well-nourished, strong woman, severe and constant leucorrhea; constant left-sided pain.	Mobile retroversion, with endometritis; pathologic cervix; painful left ovary; lacerated perineum.	Curettement, amputation of cervix; perineorrhaphy; resection of left ovary. Oct. 2, 1902.	Complete primary union catheter required for ten days and bladder irrigation afterward.	Examination, June 12, 1905. Perfect position and condition of uterus and adnexa; menses normal, painless; has no pelvic nor other symptoms; gained 20 pounds. Robust health.
23. Miss C. S., aged 36; virgin; dressmaker.	Anemic, very nervous woman; intense backache, constant left-sided pain, dysmenorrhea, dyspepsia.	Extreme retroversion; uterus mobile, with severe catarrhal endometritis; descended, very tender ovaries, cystic and cirrhotic; catarrhal left tube.	Curettement; resection of right ovary; removal of left tube and ovary. Oct. 25, 1902. Bad ether narcosis.	Moderate temperature for several days; primary union but induration of wound.	Examination, June 20, 1904. Position of uterus and ovary very good, but chronic metritis continues; has bearing-down sensations; has digestive disorder, headaches, dysmenorrhea and marked neurasthenia; half capacity as dressmaker.
24. Mrs. A. K., aged 28; widow.	Fairly nourished woman, vigorous frame, backache, dysmenorrhea, menorrhagia.	Mobile retroversion, with endometritis; lacerated perineum; adnexa descended but normal.	Curettement; perineorrhaphy; intraperitoneal palpation of adnexa. Oct. 31, 1902.	Comfortable convalescence primary union complete.	Examination, October, 1904. Dr. Barnard. Uterus in good position, but patient is pregnant and bleeding from an induced abortion. In good health until now.
25. Mrs. M. M., aged 31; iv-para; working housewife.	Anemic, poorly nourished woman; somewhat neurasthenic; constant right sided pain and backache; leucorrhea, dyspepsia and melancholia.	Extreme retroversion, of subinvoluted uterus; free, endometritis; right ovary very large and partly cirrhotic.	Curettement; resection of right ovary. Nov. 10, 1902.	Little temperature for two days; patient comfortable and cheerful; primary union.	Examination, May 30, 1905. Normal position and condition of all organs, aside from endometritis, since an induced abortion; is in greatly improved spirits since operation; feels well; has full working capacity.

Patient.	Symptoms.	Anatomical Diagnosis at operation.	Additional to bi-inguinal section and date.	Result and convalescence.	Postoperative condition.
26. Mrs. B. W., aged 25; multipara, working housewife.	Slender frame, anemic, very nervous; constant back and side aches, with bearing down feeling; left intercostal neuralgia, dyspepsia, diarrhea, palpitation.	Extreme retroflexion; uterus movable; endometritis, sub involution; lacerated perineum; ovaries partly cystic and cirrhotic.	Curettement; perineorrhaphy; resection of both ovaries. Nov. 12, 1902.	Almost afebrile course anxious for solid food primary union.	Examination, December, 1903. In good health during last half year; was nervous and feeble for six months; had one application tincture iodin to endometrium for excessive menses; also general medical treatment; organs now in good position and condition.
27. Miss A. Z., aged 22; virgin; schoolgirl.	Slender build, anemic, nervous; constant backache and right-sided pain; dyspepsia, severe disabling dysmenorrhea.	Extreme retroversio-flexion, uterus mobile; large corpus luteum; cyst in adherent right ovary; sclerosed left ovary; two small parovarian cysts in tubal left mesentery.	Curettement; liberating and resection of right ovary; removal of left parovarian cysts. Nov. 20, 1902.	Afebrile, comfortable convalescence; primary union.	Examination, May 8, 1905. Anatomic status and function of all organs fully normal; former irregular menses now regular every 26 days; formerly dysmenorrhea (cramps), now no pains with menses; formerly constipation, now regular bowels, appetite good, no dyspepsia; occasional rheumatism; works regularly.
28. Mrs. C. H., aged 26; i-para; working housewife.	Slender, fairly nourished woman; constant side and back ache; dysmenorrhea, menorrhagia.	Moderate retroversion of sub involuted uterus; endometritis; ovaries partly cirrhotic, partly cystic.	Curettement; resection of both ovaries. Dec. 15, 1902.	Afebrile, comfortable convalescence; complete primary union.	Examination, May 10, 1905. Normal position of all parts; entirely well until a few months ago; now uterus and left ovary a little tender; slight dysmenorrhea and leucorrhea; does full housework.
29. Miss D. B., aged 22; virgin; domestic.	Slender, anemic, poorly nourished woman; constant left-sided pain and backache; leucorrhea; dysmenorrhea; dyspepsia, suspicions of stones in bile passages.	Extreme retroversion; movable uterus; large right femoral ring; endometritis; descensus of left cystic ovary.	Curettement, resection and suspension of left ovary; ligaments slender and fixed in broad ligaments, requiring careful dissection to develop them. Nov. 25, 1902	Normal recovery; late suppuration on one side.	Examination, Aug. 19, 1904. Position of uterus and ovaries normal, the latter are tender, some dysmenorrhea and diffuse pelvic pains. The patient is anemic, poorly nourished, hysterical and has dyspepsia and more marked disorder of bile passages; only half working capacity.
30. Mrs. J. W., aged 29; 0-para; sterile; housewife.	Vigorous frame, well nourished; severe dysmenorrhea, constant pain in back and left side.	Retroverted, mobile uterus left ovary and tube extremely adherent; right tube and ovary less so, and cystic; fistula in ano.	Curettement; operation for fistula in ano; difficult but complete liberation of left tube and ovary, also of right adnexa; resection of both ovaries, suspension of left tube and ovary; right salpingostomy. Jan. 8, 1903.	Little temperature; very comfortable convalescence and primary union	Examination, May 18, 1905. Perfectly normal position and condition of all organs in pelvis; menses normal and painless; no symptoms but sterility; robust health.
31. Mrs. H. Y., aged 24; iii para, two abortions; housewife.	Anemic, fairly nourished woman; constant backache and left-sided pain; dyspepsia, constipation.	Metritic retroverted mobile uterus; both ovaries enlarged; right ovary adherent; endometritis.	Curettement; removal of left tube and ovary; liberation and resection of right ovary	Comfortable primary union	Examination. Patient became pregnant after nine months; gestation normal and comfortable, aside from little pain in left scar; labor fourteen hours; normal; child 11½ pounds. Examined March 22, 1905. Position and condition of all pelvic organs normal; robust general health (Dr. Bernard).
32. Miss L. S., aged 39; virgin; nurse.	Fairly nourished; constant left-sided pain and backache; severe dyspepsia; dysmenorrhea and menorrhagia.	Mobile retroversion and endometritis; very large cystic left ovary, extremely descended; right ovary less so	Curettement; removal of left tube and ovary and resection and suspension of right ovary, appendectomy with electrothermic forceps through small separate wound, made bluntly, appendix buried behind cecum April 2. 1903.	Primary union and normal course aside from intestinal obstruction for which appendiceal wound was opened and small intestine liberated 30 hours after operation.	Examination, May 22, 1905. Position and condition of uterus and ovary normal; little backache and headache at menstrual time; flow two days; good general health.
33. Mrs. J. A. W., aged 27; 0-para; housewife.	Fairly nourished, severe left-sided pain and backache; dyspepsia and headache; dysmenorrhea; very nervous.	Mobile retroversion and metritis; globular extremely descended left ovary; both ovaries contained follicle cysts.	Curettement; resection of both ovaries; reinforcement of round ligaments with peritoneal envelope. April 9 1903.	Primary union; very comfortable convalescence.	Examination, June 1, 1905. Position and condition of uterus and appendages ideal; no symptoms anywhere except sterility; marked gain in flesh.
34. Mrs. B. K., aged 24; 0-para; working housewife.	Well-nourished woman; severe pain in back and right side; dysmenorrhea; gastralgia and headaches.	Uterus retroverted and firmly adherent; ovaries likewise; marked endometritis; cystic ovaries.	Curettement; liberation of uterus and adnexa; resection of both ovaries; extensive dissection of round ligaments out of broad ligaments. May 25, 1903.	Temperature 102.5 on second day, quickly subsided; fairly comfortable convalescence; ligature abscess on right side after second week.	Examination, May 10, 1905. Condition and position of pelvic organs normal; some backache at menses; sterility only complained of; does full housework.
35. Mrs. T. A. L., aged 21; 0-para; housewife.	Strong, well-nourished woman; constant right-sided pain and backache; painful and irregular menses; headaches.	Retroverted uterus; left tube and ovary firmly adherent; severe endometritis; left hydrosalpinx size of finger; both ovaries cystic.	Curettement; resection of right ovary; removal of left ovary and hydrosalpinx July 17, 1903.	Afebrile, primary union; sat up in one week.	Examination, Jan. 30, 1904 (Dr. James). Position and condition of pelvic organs very good.
36. Miss I. F., aged 23; virgin; clerk.	Somewhat anemic woman; constant left-sided pain; backache, dyspepsia, constipation, headache, irregular painful menses.	Uterus retroverted and anteflexed, movable; stenosis of cervical canal and internal os; left ovary corpus luteum cyst.	Difficult dilatation and curettement; slight incisions with in internal os, cauterized resection of left ovary; difficult dissection of distal portion of right ligaments July 20. 1903.	Afebrile, primary union.	Examination, June 4, 1905. Perfectly normal position and condition of pelvic organs; no symptoms; menses now regular, three days and painless; no leucorrhea.
37. Mrs. H. B., aged 22; 0-para; manicurist.	Slender, fairly nourished woman; constant left-sided pain from ovary; severe dysmenorrhea.	Mobile retroversion; descensus of cystic left ovary; left inguinal hernia.	Curettement, resection of left ovary; radical cure of left inguinal hernia. Sept. 21 1903.	Very smooth and afebrile; complete primary union	Examination, June 12, 1905. Perfectly normal position and condition of uterus and adnexa; menses painless; no pelvic or other symptoms; is in good health and works regularly.

38. Mrs. D. W., 0-para; working housewife.	Poorly nourished, anemic woman; constant pelvic pains; dyspepsia, gastralgia, extreme nervousness.	Mobile retroversion and endometritis; firmly adherent adnexa; cystic and cirrhotic ovaries; closure of both tubes, left one a hydrosalpinx.	Curettement; freeing of adnexa; resection of right ovary; opening right tube; suspension of both; removal of left hydrosalpinx and left ovary. Sept. 25, 1903.	Temperature 101 for three days; complete primary union; very nervous.	Examination, May 21, 1905. Patient was nervous; had various pains during first six months; received general medical treatment; uterus and ovary in good position and fair condition; great gain in weight; normal working capacity, but bemoans sterility.
39. Miss A. K., aged 30; virgin; cashier.	Stout, well-nourished woman; constant side and back aches; dyspepsia.	Mobile retroversion; catarrhal uterus; cystic left ovary.	Curettement; formalin cauterization; stitching wound of corpus luteum cyst. Sept. 28, 1903.	Afebrile, comfortable; primary union; unusual amount of uterine discharge from cauterization.	Examination, Dec. 24, 1904. Position and condition of uterus normal; right ovary tender and often source of pain; she had amenorrhea five months after operation, with discomfort; in very good health otherwise since marriage six months ago.
40. Miss A. C. V., aged 20 virgin; stenographer.	Fairly nourished woman; constant left-sided pain; severe dysmenorrhea; dyspepsia.	Movable retroversion; cystic descended left ovary; catarrhal uterus.	Curettement; resection of left ovary; removal of hydatid cyst from right tube. Nov. 9, 1903.	Very comfortable, afebrile course; primary union.	Examination, May 13, 1905. Position and condition of pelvic organs normal; menses regular and painless; little leucorrhea; good health; works regularly.
41. Mrs. O. B., aged 22; ii-para; working housewife.	Anemic, poorly nourished woman; diffuse pelvic pains, worse on right side; dyspepsia, headaches, nervousness.	Mobile retroversion and endometritis; large and follicular ovaries; lacerated perineum.	Curettement; resection of both ovaries; perineorrhaphy. Jan. 4, 1904.	Smooth afebrile; primary union.	Examination, Oct. 10, 1904. Position of uterus and ovaries normal; excessive menstrual flow; leucorrhea; otherwise well; intrauterine iodin application with syringe applicator.
42. Mrs. S. H., aged 35; iii-para; working housewife.	Fairly nourished woman; little anemic; constant backache and dyspepsia; dysmenorrhea.	Uterus extremely retroverted, metritic, movable; lacerated perineum.	Curettement; perineorrhaphy. Jan. 7, 1904.	Afebrile; primary union. catheter required one week.	Examination, March 15, 1905. Normal position and condition of adnexa; after four months' medical treatment for rheumatic conditions and local treatment of metritic uterus by massage and galvanism, she has quite good health and strength.
43. Mrs. W. P., aged 23; 0-para; married five years; housewife.	Well-built and nourished woman; constant right-sided pain and backache; dysmenorrhea and menorrhagia.	Retroverted, metritic movable uterus; adnexa both sides adherent; left ovary cystic; right hydrosalpinx.	Curettement; liberation of adnexa; removal of right tube and ovary. Jan. 30, 1904.	Normal; primary union.	Examination, May 23, 1905 (Dr. White). Condition and position of pelvic organs normal; menses normal, painless; normal general health.
44. Mrs. J. L., aged 32; iii-para; working housewife.	Patient with rugged muscular frame, constant backache; dyspepsia and great nervousness; obstinate neuralgias in chest and head; menorrhagia.	Metritic movable uterus in marked retroversion; severely pathologic cervix; lacerated perineum. Right ovary cystic (corp. luteum).	Curettement, amputation of cervix; perineorrhaphy; resection of right ovary; removal of three hemorrhoids by ligatures. Feb. 4, 1904.	Smooth; primary union.	Examination, Sept. 3, 1904. Position of uterus and adnexa very good and in fair condition, but has required massage and galvanism of uterus for continued metritis for about four months. Patient has renal insufficiency, with some dysmenorrhea and rheumatism.
45. Mrs. W. A. L., aged 31; 0-para; housewife.	Fairly built and nourished woman; melancholic disposition, extreme nervousness, disturbed sleep; pelvic pains not prominent; dysmenorrhea.	Extreme retroversion; uterus mobile, large; ovaries descended and cystic.	Curettement; resection of both ovaries (at patient's house). Feb. 18, 1904.	Some febrile movement; stitchhole abscess on one side; almost total intestinal obstruction for two days resolved spontaneously	Examination, Feb. 7, 1905. Uterus rather large in fair not marked anteversion; menses normal; local massage and galvanism of metritic uterus for several months after operation and tonics for a longer time; has gloomy moods still at times, but no pelvic symptoms.
46. Mrs. F. S., aged 37; iv-para and 2 abortions; minister's wife.	Anemic woman; melancholia with maniacal paroxysms; dysmenorrhea; constant backache; intercostal neuralgias; dyspepsia.	Mobile retroversion; marked metritis; lacerated perineum; cystic right ovary.	Curettement; perineorrhaphy; resection of ovary; right ligaments thin and soft; left ligament tore off but stump was caught and anchored in the wound against Poupart's ligament. March 10, 1904.	Comfortable; no nervousness, but late suppuration on one side.	Examination, May 17, 1905. Position and condition of uterus and adnexa very good; no pelvic or other symptoms; former marked melancholia, neuralgia and dyspepsia gone; has quite robust health; took tonics about a year.
47. Mrs. T. C., aged 33; multipara; housewife.	Well-built woman; constant left-sided ovarian pain and neuralgias of leg, loin, chest and arm of same side; backache; dyspepsia; constipation and dysmenorrhea.	Large, metritic, retroverted mobile uterus; left tube and cystic ovary prolapsed and adherent; lacerated perineum.	Curettement; perineorrhaphy; liberation of left adnexa; electric cauterization of follicles in left ovary. July 14. 1904.	Smooth, afebrile; primary union.	Examination, May 30, 1905. Normal position and condition of all pelvic organs; several applications tincture iodin required to endometrium; massage and galvanism of uterus to overcome chronic metritis; robust health; former persistent ovarian referred neuralgias gone.
48. Miss M. R., aged 23; virgin; dressmaker.	Poorly nourished, anemic woman; diffuse constant pelvic pains in sides and back, aggravated during menses; no colicky pains; marked dyspepsia; generally feebleness and nervousness.	Movable retroversion, with apparent retroflexion; catarrhal endometritis; left ovary cystic.	Curettement; electrothermic cauterization of left ovary; special dissection of right ligaments from broad ligaments. July 23, 1904.	Comfortable; primary union.	Examination, June 12, 1905. Position and condition of uterus and adnexa ideal; menses normal and painless; no pelvic or other symptoms; little leucorrhea; good general health.
49. Miss T. D., aged 25; virgin; domestic.	Feeble build; somewhat anemic; constant left-side and backache; dysmenorrhea; dyspepsia; headaches; unable to work.	Small, extremely retroverted, mobile uterus; catarrhal endometritis; cystic left ovary; imperfect development of organs.	Curettement; resection of left ovary; very feeble right ligaments, strengthened by adjacent peritoneum. Oct. 15, 1904.	Afebrile, comfortable primary union.	Examination, May 10, 1905. Position and condition of uterus and appendages normal, but patient was too feeble to work for about six months, and required one application tincture iodin to endometrium; galvanism to left ovary several times; tonic remedies all the time; she is now in fair health.
50. Mrs. M. L., aged 25; i-para; working housewife.	Fairly nourished, very nervous woman; neurasthenic since railroad injury six months ago; back and side aches constantly; dysmenorrhea; leucorrhea.	Extreme retroversion, movable; adnexa adherent; endometritis; lacerated cervix; cystic left ovary.	Curettement; Emmett cervix operation; resection of left ovary. Oct. 18, 1904.	Normal; primary union.	Examination, April 1905 (Dr. Bernard). Normal position and condition of uterus and adnexa; normal pelvic functions; patient has ophthalmic goiter.

can not ascend with it, as they should, being fixed at a lower plane. The enforced tension on these sensitive structures entails discomfort on the patient; and the direction of this traction is opposed to that of the extraperitoneal (often imperfectly) shortened round ligaments, which endangers their integrity and tends to induce return of displacement of the uterus. Such adhesions of an ovary and tube are severed with the greatest ease by a finger within the internal inguinal rings, because their natural position, fortunately, is just in front of them.

Second: The round ligament does not always slide extensively enough within the broad ligaments without some special intraperitoneal dissection, to impart forward traction to the uterus directly enough; but by the exclusively extraperitoneal technic it is left to pull from the point of its entanglement in the broad ligament, several inches away from the uterus, which manifestly predisposes to a recurrence of retroversion. This condition will be found once in every four or five individual ligaments dealt with, even in simple cases, according to my observations in at least 130 cases, if the effect on the uterus of traction on the shortened ligament be noted each time by a finger introduced alongside of it. This condition is readily corrected by a little dissection around the ligament when this is drawn into the slightly dilated inguinal ring.

Third: In the rather frequent cases of retroversio-flexion with a heavy fundus the center of gravity of the body of the uterus is often posterior to a line joining the points of origin of the round ligaments, while the posterior cervical attachments are relaxed and allow it to rise forward. In this condition traction on the round ligament will raise the cervix still more forward quite as often as it will raise the fundus, unless it is quite completely dissected out from the broad ligament on each side and is given a new course almost directly forward. Koenig and Feuchtwanger[14] have also observed this. This dissection and development of the round ligaments in such cases is readily done through the merely dilated rings.

That such intraperitoneal exploration and manipulation needs to be added to the simple Alexander operation, even in the simple cases, is indicated by results of that operation as reported, for instance, by Longyear,[15] who in 58 cases had five recurrences of displacement, even without any test of pregnancy affecting them at all. In consequence of his working outside of the inguinal canals likewise, he did not find either round ligament in one case, and only one in another case. Such inability to find the ligaments is a worse failure of such superficial technic than is a recurrence of displacement after the operation. It is certainly not unfair, therefore, to count such failures with the recurrences of retroversion. These two added to the five recurrences in the Longyear report makes 12.5 per cent. failures in all. This is about equal to the results of the simple Alexander operations as reported by a number of German operators, particularly those who aim not to open the inguinal canals according to Alexander.

Such results are not satisfactory when it is considered that the operation is never a life-saving one, never done for grave indications, and that non-surgical means could largely have been substituted; and, in view of the fact that I have now 155 examined cases, the majority of which were complicated, so much so that pessaries, etc., were out of the question and surgery was positively the only resource. The patients were all carefully examined, on an average nearly two years after operation and only one case of return of displacement was found among them; no hernias, while some fifteen hernias, at least, were incidentally cured; and twenty-one patients who bore one or more children, all passed the double test of pregnancy successfully. Among those gynecologists who, on account of such considerations, have been induced, like myself, to extend the bounds of the Alexander operation, and to give the larger class of complicated cases of this kind the superior benefits of a more thorough bi-inguinal shortening of the round ligaments, are the following: Professor Fritsch of Bonn removed a tubercular tubal tumor through the inguinal ring, and canal incidentally. Barth[16] of Danzig says that an adequate technic for the Alexander operation was only secured when Kocher opened the inguinal canals in doing it. Barth does this and also opens the peritoneum to sever adhesions and to prove the position of the uterus. Rosinski[17] of Koenigsberg opens the peritoneum to get the ligaments dissected out sufficiently. Heinrich[18] of Bremerhafen advocates opening the peritoneum for similar reasons and says that Professor Zweifel of Leipzig does so also. Professor Kossmann[1] of Berlin, last year reported about twenty cases in which he had performed what at that time he baptized as "the Goldspohn operation." Sigmar Stark[19] says that he has been doing this bi-inguinal celiotomy by a little different technic and claims not to have known until two years ago of any of my seven articles on this subject that were out then. McKay[20] of Sydney, Australia, does by this bi-inguinal celiotomy substantially what I do and says, "I found out later that Goldspohn anticipated me; but I can from my experience in the procedure fully endorse his remarks on this innovation, and I have no doubt that it will be only a matter of time when this addition to the Alexander operation will be adopted on all sides . . . Such an easy matter is it to explore the ovaries and tubes through the internal ring, that I am now adopting this method in preference to the median incision when I wish to remove a small ovarian cyst or hydrosalpinx" (in connection with a retroversion, of course).

During the years 1902, 1903 and 1904 I performed this operation on 55 patients. One patient died after 36 hours of very satisfactory condition, from all the signs of cerebral embolism, which suddenly developed, and ended inside of 20 minutes. Of this number five were not accessible for examination, but 49 were examined by me or one of five other physicians after an average interval of twenty-two and one-half months after operation, and are reported in the detailed table. In five of these the uterus was adherent. In nine cases the adnexæ of both sides were adherent and in five of those on one side only. Three hernias were cured incidentally. The tube (five times a hydrosalpinx) and ovary were removed through the dilated rings on the right side four times and on the left side six times. Cystic follicles and corpora lutea or hard cirrhotic portions of ovaries were excised from the right ovary 26 times and from the left ovary 31 times. In a few, this was done by thermocautery. Lateral suspension of tube and ovary

14. Koenig and Feuchtwanger: Monats. f. Geb. u. Gyn., vol. vi, p. 344.
15. Longyear: Amer. Jour. Obstet., November, 1903, p. 668.
16. Barth, Deutsch. med. Wochft., 1904, p. 262.
17. Rosinski: Deutsch. med. Wochft., 1904, p. 262.
18. Heinrich: Muench. med. Wochft., 1901, xlii, p. 1676.
19. Sigmar Stark: Cincinnati Lancet-Clinic, June 3, 1905.
20. McKay; Australasian med. Gazette, 1904, vol. xxiii, p. 327.

was made twice on the right and four times on the left side. Salpingostomy was done twice. Small parovarian cysts were removed twice. Primary union of the inguinal wounds occurred in all but five cases in which a stitch hole abscess or late catgut suppuration ensued on one side. As collateral operations at the same sitting the following were performed: Curettements 49, amputation of cervix 7, Emmett operation 1, my intrapelvic infravaginal perineorrhaphy 15, hemorrhoids by cautery 6, appendectomy by separate small wound made bluntly 1, right nephrorrhaphy 1. Among this group of cases three confessedly induced abortions were reported, and four cases of normal labor at term. In addition to the latter, six cases of normal gestation and labor were also found among the group of cases previously reported—making ten new such "double test" cases to be added to the eleven that I had before, or twenty-one in all; each patient was carefully examined afterward and the uterus found in rather more pronounced anteversion and usually in good involution. The same may be true of two others of whom examinations could not be had as yet. Since my last report I have noted the following similar cases reported by other operators in which the patients were examined after a subsequent labor and found to have no recurrence of displacement, thus having passed what I termed the double test of pregnancy successfully: J. R. King,[21] 3 cases; Professor Fuchs, Werth-Kiel, 6 cases and 1 temporary recurrence; Reiferscheid,[22] Bonn, 9 cases; Steidl,[23] Strassburg, 4 cases; Haid,[24] Buffalo, 12 cases; R. H. Car, Chicago, 5 cases; Heinrich,[25] Bremerhafen, 5 cases; Morlaender,[26] 1 case; John G. Blake,[27] Boston, 3 cases; W. M. Conant,[28] Boston, 6 cases; F. W. Johnson,[29] Boston, 12 cases; L. H. Boldt,[30] New York, 4 cases; P. F. Munde,[31] New York, 4 cases, and W. M. Polk,[32] New York, 4 cases. These, with 10 cases of mine, make 88, of which one only was a temporary recurrence. These are separate from a collection of 80 such cases that I reported three years ago.[33] among which there were two recurrences of displacement (in patients operated on for prolapse). Thus we have 168 cases in all, with only three failures and those for special reasons mostly. Furthermore, Dr. F. W. Johnson says "Dr. Cleveland, New York, with a large experience with the Alexander operation, and Dr. Edward Reynolds, Boston, who has confined many such cases, have never seen a return of displacement in cases after labor following the Alexander operation.

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21. King, J. E.: Buffalo Med. Jour., 1904-5, vol. xliv, p. 374.
22. Reiferscheid: Arch. f. Gyn., 1904, vol. lxxiii, p. 159.
23. Steidl: Monats. f. Geb. u. Gyn., 1904, p. 234.
24. Haid: Amer. Jour. Obstet., November 1904, p. 706.
25. Heinrich: Naturforscherversamml., Hamburg, Sept. 27, 1901.
26. Morlaender: Zeits. f. Geb. u. Gyn., vol. xlvi, p. 100.
27. John G. Blake: Amer. Jour. Gyn. and Obstet, April, 1896, p. 460.
28. W. M. Conant, Amer. Jour. Gyn. and Obstet., April 1896, p. 460.
29. F. W. Johnson: Amer. Gyn. and Obstet. Jour. April, 1896, p. 460.
30. L. H. Boldt: Amer. Jour. Gyn. and Obstet, April 1896, p. 460.
31. P. F. Munde: Amer. Jour. Gyn. and Obstet., April, 1896, p. 460.
32. W. M. Polk: Amer. Jour. Gyn. and Obstet. April, 1896, p. 460.
33. The Journal A. M. A., June 5, 1902.

Did a subscriber ever stop to consider the slur cast on his intelligence when matter writen in the advertiser's office is printed as a legitimate contribution?—*Archives of Physiological Therapy.*

THE CONSERVATION OR RESTORATION OF NORMAL ANATOMY IN GYNECOLOGIC SURGERY.*

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BOSTON.

During the past few years a great wave of conservatism has agitated the entire gynecologic fraternity, not only throughout this country, but also Europe, although it must be admitted that conservatism has not yet achieved the following it deserves even here. The French and to a less degree the English and German gynecologist still vastly prefers to do a high amputation of the cervix or even a vaginal hysterectomy in cases in which better symptomatic, functional and anatomic cures, together with a more complete conservation of the child-bearing function, may be obtained by a tracheloplasty. In France it is true that ovarian conservation has received great stimulation by the well-known work of Jayle and his confrères in regard to the internal secretion of the ovary. In our own country I feel certain that I am not overstating the fact when I say emphatically that it is now a very rare occurence for a competent gynecologist so far to forget or to neglect the principles designated in the title of this paper as to remove or to sacrifice a healthy, or even a healthy portion of an ovary. This subject, however, has been too frequently and too well exploited by others to demand especial consideration here.

My desire in bringing to your consideration this paper is to extend this tendency to conservatism to include two more large classes of cases which have been often and hotly debated, namely, uterine displacements and plastic gynecologic surgery. If this paper differs from my former papers in showing little, if any, evidence of original research work, its justification must be sought in the extemporaneous remarks of Dr. Seth C. Gordon, of Portland, Me., on the occasion of the complimentary dinner tendered him in honor of his fiftieth year of medical practice on the 6th of June last, in which he said that the highest attainment of any medical man was the ability to think for himself and to form independent, if not original, opinions on each subject, and I ask you to accept what follows as the result of such independent and, perhaps, original thought.

That the paper and its discussion may not be too broad for careful consideration, I have omitted any discussion of the merits of the treatment of uterine displacements by pessary, and shall assume in the following that we are dealing only with cases in which operative treatment has been deemed advisable.

One of the most thoughtless and unscientific assumptions ever made in this connection not only by the medical profession as a whole, but even by many able gynecologists, is that the multiplicity of operative procedures advocated by various operators bears evidence to the fact that no one satisfactory operation has as yet been devised. This, as I shall attempt to prove, is utterly fallacious. It is not only true that one satisfactory operation has been described, but that many such absolutely rational and scientifically, anatomically and symptomatically satisfactory operations have been advocated and are in daily use.

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

If any error can be greater than the one just outlined, it is that of assuming that, since some one favorite operation appeals to the appreciation of the rational in gynecology, it is right and wise to adopt that operation and to employ it in the treatment of all cases of the particular form of displacement for which it is considered a remedy. Empiricism is hotly condemned and denied throughout the whole realm of medicine, and yet such an adoption of one operation for all cases of any given uterine displacement constitutes nothing short of extreme empiricism.

To me it seems that the multiplicity, all too limited, testifies to the infinite variety anatomically manifested by such cases and also to the originator's rebellion against the former empirical employment of methods unsatisfactory in certain respects in certain cases. Moreover, being convinced that the originator of each of the better known operations does not in his own practice consider his operation by any means an universal panacea, nor use it exclusively in all his operative cases, I addressed the following letter to each of twelve American originators of such operations:

I am preparing a paper for the coming session of the American Medical Association entitled "The Conservation or Restoration of Normal Anatomy in Gynecologic Surgery." In treating of this subject I wish particularly to commend such operations as restore uterine displacements through the employment of the uterine ligaments, and as you have originated and publicly advocated such an operation, I shall greatly appreciate answers to the following questions:

1. Do you find your operation applicable to all, and do you employ it in all cases of uterine retrodisplacement in which you operate?

2. If not, in what percentage, approximately, do you employ it?

3. Am I at liberty to quote your reply in connection with my paper?

Nine of the twelve gynecologists thus addressed replied at much length, and each and all granted leave to quote their replies, for which I sincerely thank them, and from which I will quote.

DR. BALDY finds his operation applicable to most cases except those in which, through concomitant or previous operation the round ligament on one or both sides is absent.

DR. BOVÉE says: "I do not find my operation applicable to all cases nor do I employ it in all cases of uterine retrodisplacement in which I operate. There are various conditions, such as deep laceration of the cervix, the presence of tumors in the posterior wall of the uterus, habitual constipation with straining at stool, habitual retention of urine, mal-attachment of the uterovesical and uterosacral ligaments to the uterus which may cause retrodisplacements of the uterus, and especially is this so of appendage disease. In such cases, operation on the uterosacral and round ligaments would be manifestly unadvisable."

He uses his method in about one-third of his cases.

DR. A. PALMER DUDLEY, New York, finds his operation applicable to about one-fourth of his cases.

DR. GILLIAM says: "I find my operation applicable in all cases, except such as those in which the ligaments are preternaturally short and the uterus is held rigidly in retroposition by conditions that can not be overcome. The percentage is exceedingly small."

DR. GOFFE says: "I wish to say unhesitatingly that I find my operation for the cure of retrodisplacements of the uterus applicable to all cases in which I operate primarily for the displacement.. Sometimes, in cases in which I have submitted a patient to laparotomy, for the relief of conditions other than displacement or complicating it, I shorten the uterosacral ligaments and fortify this procedure by shortening the round ligaments also. In patients at or near the menopause requiring multiple repairs, such as trachelorrhaphy or amputation of the cervix, perineorrhaphy, etc., for brevity I frequently do a vaginal fixation. My operation, however, is the standard procedure."

DR. KELLOGG, finding his original operation inadequate, has devised a second operation, and now rarely needs any other.

DR. MANN says: "I do not employ it in all cases, but only in those in which for some other purpose I am obliged to open the abdomen, or when the Alexander operation has failed. I do four operations for displacement: the Alexander, my operation for internal shortening, Kellogg's operation and ventral fixation, not suspension.

DR. NEWMAN says: "In all cases, when it is not necessary to open the abdomen for other work, I employ my 'high or direct' operation for shortening the round ligaments and with uniform good results. When celiotomy is necessary (for intra-abdominal complications) I shorten the ligaments by the intra-abdominal methods."

DR. WYLIE disapproves of ventral suspension and fixation, and reserves his own operation for those cases in which opening the abdomen is necessary for complications, doing the Alexander operation when celiotomy is not necessary.

My reason for making these excerpts at such length is that they seem more potent than any other argument I could offer. When a man has patiently evolved an operation, it becomes to him almost as a part of himself, and any overenthusiasm manifested by him in its behalf is as easily excused as is the more exalted idea of a child excused in its parent. Moreover, we might reasonably expect its originator to be more expert than others in its application and to expect and actually to achieve a greater percentage of successes by its employment than any one else. It seems to me, therefore, that when the foregoing nine gynecologists, each and every one, find from a few to many cases requiring some other operation than their own, it is a strong argument in favor of a great familiarity with the greatest possible number of rational operations for the same condition. In other words, these replies to my letters confirm absolutely my contention, namely, that no one operation will fulfill all indications and that, therefore, a multiplicity of operations is an essential to a broad success. Just here permit me to insist that there is one attainment the possession of which by any operator transcends all other abilities; I allude to mechanical ingenuity.

It is well nigh impossible for the present generation of gynecologists to attain a degree in medicine without a good fundamental education in the anatomy, physiology and pathology of the pelvic organs of women, and we can, therefore, assume that such knowledge is theirs. Assuming that due consideration is given to the functions which the pelvic organs must perform, it is my contention that the operator, having thoroughly familiarized himself with the greatest number of operative procedures for any given condition, and possessed of sufficient mechanical ingenuity to vary any given operation to meet the requirements of his individual cases instead of following absolutely the originator's description, or, if need be, of combining the indicated portions of two or more such operations so as to restore the closest possible approximation of the original normal anatomy, will give the greatest measure of relief to his patients.

No discussion of the merits of any method of operative treatment of retrodeviations of the uterus is complete without comparing the merits of the utilization of the normal anatomic structures with the demerits of the introduction of adventitious, artificial and unnatural uterine supports. In the latter class I, of course, allude to ventral fixation and suspension and vaginal fixation.

I am not prepared to say that ventral fixation or suspension or vaginal fixation are absolutely unjustifiable operations, but I am prepared to say that they are performed far more often than indicated or even justified. This is true for several reasons. The ventral suspension and fixation are by far the easiest operations performed within the abdomen and can be done by any tyro, their safety merely depending on his appreciation and practice of asepsis. No minute knowledge of pelvic anatomy is required, because the operation itself is a violation of every unit of such anatomy.

The only cases in which I have ever considered myself justified in doing a ventral suspension or fixation have been cases in which through concomitant or previous operations, developmental arrest, atrophy due to long persistence of untreated disease, or senile degeneration, the normal supporting structures of the uterus were absolutely unavailable to secure it in its restored normal position. Believe me, if I could only happily convince all physicians that the foregoing constitute the only rational indications for these two operations, and that their performance under any other circumstances constituted an acknowledgement either of inability on the operator's part to do good work with the sufficiently abundant material which Nature has provided and with which the work was originally done, or an inexcusable indifference to the best interests of the patient, these operations would be very rarely performed. Furthermore, should the time ever come, as I hope it will, when these views are widely held, our successors will look back on the era of the undue prevalence of these two operations much as we now look back on venesection.

It is not to the performance of ventral suspension and ventral fixation in properly selected cases by expert operators of wide experience and established ability, possessed of expert selective judgment, that I object. These operations have been advocated and performed by the best gynecologists of the world, and in proper cases—which each year are being more carefully selected, and hence are fewer in proportion to the total number of operations for such conditions—with generally satisfactory results, and this fact alone gives them a valid standing, always, be it understood, in proper cases only.

My objection to the performance of ventral suspension is because of its ease, simplicity and safety by incompetent and inexperienced operators who would not be competent properly to adjust the uterosacral, round and broad ligaments, and who, if ventral suspension had never been devised for them, would still be using the comparatively harmless pessary or referring their patients to competent operators.

It is the too frequent performance of these operations by these occasional or inexperienced operators in cases in which none of the above-named indications for ventral suspension exist, that furnishes the abundant material for dystocias, intestinal obstructions, painful abdominal wounds and other undesirable sequelæ not infrequently observed.

The degree of surgical skill and address necessary for the performance of the operations involving the shortening of the round ligaments, the shortening or transplanting of the uterosacral ligaments and the transplanting of the uterovesical attachment to the cervix with the very vague structures known as the uterovesical ligaments should not be exaggerated. They are all comparatively simple operations, provided only that the operator knows thoroughly his normal anatomy, has the proper instruments and is well based in the technic of the operation which he has elected to form the foundation of the individual operation. For example, so much has been said and written relative to the difficulty of isolating the round ligaments according to the technic of Alexander that in ten consecutive, unselected cases since having this paper in mind I have had my anesthetist accurately note the physical condition of the patient and the time consumed between the making of the initial skin incision to the complete isolation of the round ligament

The findings I have tabulated as follows:

Case 1.—Patient slight.....	Right ligament	3 min.	10 sec.
	Left ligament	2 min.	35 sec.
Case 2.—Patient slight.....	Right ligament	2 min.	45 sec.
	Left ligament	3 min.	25 sec.
Case 3.—Patient moderately stout.	Right ligament	3 min.	20 sec.
	Left ligament	3 min.	15 sec.
Case 4.—Patient stout.....	Right ligament	11 min.	40 sec.
	Left ligament	3 min.	20 sec.
Case 5.—Patient slight.....	Right ligament	4 min.	15 sec.
	Left ligament	1 min.	55 sec.
Case 6.—Patient moderately stout.	Right ligament	3 min.	30 sec.
	Left ligament	3 min.	10 sec.
Case 7.—Patient slight.....	Right ligament	4 min.	50 sec.
	Left ligament	3 min.	
Case 8.—Patient moderately stout.	Right ligament	7 min.	20 sec.
	Left ligament	4 min.	50 sec.
Case 9.—Patient stout.....	Right ligament	6 min.	20 sec.
	Left ligament	5 min.	35 sec.
Case 10.—Patient slight.....	Right ligament	2 min.	40 sec.
	Left ligament	2 min.	15 sec.

This table shows that in these ten cases which were ordinary and unselected, being consecutive, the longest time consumed in isolating the round ligament was in Case 4, in which, through much oozing of blood from a thick, fat layer, the structures becoming obscured by blood staining, 11 minutes and 40 seconds, practically 12 minutes, were consumed in isolating the first ligament, only 3 minutes and 20 seconds being required on the left ligament because information acquired in isolating the first ligament always makes the isolation of the second quicker. The average time per ligament was 4 minutes and 27½ seconds, which I feel certain can not be considered excessive, and I feel no hesitation in saying emphatically that any material lengthening of the operation is invariably due to the lack of knowledge of the regional anatomy, a fault easily overcome, or to a careless disregard of proper technic as it was in the isolation of the right ligament of Case 4.

The uterosacral ligaments are not well understood or are misunderstood by many, but when their anatomy is once mastered, which is not in the least difficult, I feel certain that every surgeon who has had experience with them will sustain me in the statement that their isolation and manipulation are relatively easy.

Being, then, possessed of such good means of restoring and conserving normal pelvic anatomy by the employment of only its natural ligaments, except as previously indicated, why should we, through indolence or indifference, fasten the uterus either mediately or immediately to the anterior abdominal wall in a way never accomplished by Nature, in a position as far removed from normal as its retrodeviation for which the operation was undertaken, and with new relations which may interfere to a greater or less extent with the performance of some one or more of its functions unless for very special indications? Last and most important of all, why, when avoidable even at a far greater expenditure of time, energy and skill than is ever demanded by the other operations, put a false band with all its baneful possibilities across from one to several centimeters of the abdominal cavity, when every surgeon in the land would consider himself highly culpable if on accidentally discovering such a band under any other circumstances, he closed the abdomen without first

safely removing that band? It is useless to say that such bands do no harm because they may do just as much harm as any other similar false band. It seems little less than a miracle that it has been reported so seldom, but I have personal knowledge of two cases, one terminating fatally, in which subsequent operations were demanded for intestinal obstruction due to such suspensory ligaments, and Dr. J. M. Baldy long ago reported nine such cases. Such risks are, or at least may be, legitimate when urgent symptoms demand relief and no other means offer an equal chance for successful relief, but not otherwise.

All that has been said of the benefits of the multiplicity of methods for the operative treatment of retrodisplacements applies equally well to the plastic operations for the repair of injuries of the birth canal.

How often we read or hear an article warmly advocating some particular method of tracheloplasty or some particular manner of amputating the cervix. This seems to me unwise and unsound if the method is offered as a substitute for others. As a supplement it should be welcomed. Learn thoroughly the basic, fundamental principles of all such operations. Accept what is sound and be prepared to use such principles of any one or several operations as the personal equation of the individual patient may require. It necessitates much work, but the end justifies the means, and those of us who have foresworn all other practices owe it to our patients and to our consultants to know the whole field as thoroughly as work can enable us to learn it. It was to gain time for such work that the other practice was relinquished.

I was greatly pleased at the last session of the American Gynecological Society to hear, as a guest, Dr. E. C. Dudley, in his presidential address, invite the greater attention of the members, and hence, of course, of gynecologists in general, to the performance of plastic, so-called minor, gynecologic operations and to deplore their too frequent relegation to assistants. I consider the restoration to its original normal relations of an old lacerated perineum as the most difficult of gynecologic operations, and I should consider the characterization of a man as a good plastic operator as the highest possible commendation. It is minor gynecology only in the sense of danger to the patient's life. It is probable that no operation is more frequently unsuccessfully performed, especially when the original laceration has led to a complicating cystocele and rectocele.

Here, again, no one operation will mend all cases. It is futile to exploit the advantages of the Hegar, the Tait or the Emmet operation as possessing ability to cure more than a certain percentage of cases. Only two considerations can determine the operation to be performed, namely, the location, extent and direction of the original laceration and the absolute necessity of removing all cicatricial tissue in order that the torn or separated muscles may be so placed as once more to perform their lost functions. Since it is rare to find two tears exactly alike, it is obvious that each of all the operations thus far described have their indications, and it is equally obvious that now and then a laceration will be found which no known operation will exactly repair. Regardless, then, of the size or shape of the adventitious tissue to be removed, the operation must completely remove all tissue abnormally present as the result of the laceration, completely exposing the separated muscles. A mere epithelial denudation is entirely inadequate, as it does not eradicate, but merely lessens the amount of such tissue.

I have no operation to prescribe definitely, but the principles above indicated are applied, with variations to suit each case, as follows: The size and direction of the tear is determined by palpation and inspection of the vaginal mucous membrane, and the outline of all tissue included within the cicatrized area is lightly marked with a sharp scalpel, irrespective of its size or shape. Parenthetically, I may say that an irregular approximation of the denudation suggested by Emmet obtains in about 65 per cent. of the cases. It will be found that this outline invariably terminates at the lowest remnant of the hymen on one or both sides and at some point high or low in the median line.

Having completed this outlining process, which requires but two or three minutes, the entire thickness of the mucous membrane is picked up on a tenaculum or with tooth forceps near and just internally to the lowest point of the hymenial remains and is cut entirely through into the loose areolar tissue. The opening is then carefully enlarged inward until it will admit the tip of the index finger. The entire outlined area is then freed from the underlying muscles and rectum by blunt dissection with the finger only in this loose areolar layer, and as soon as the outline has been slightly passed the entire mass is excised.

The remaining portions are now sutured in whatever way will best serve in the individual case to restore the parts to their original relations. Bleeding is free, but never serious and can always be controlled by the sutures without the necessity of tying any vessels, however the sutures are placed. The only necessity is that care be taken to place them well into the muscles and to avoid either perforating the rectum or allowing dead spaces to remain.

CONCLUSIONS.

The conclusions to be drawn from the work which has inspired this paper are:

1. The greater the number of ways devised for utilizing the normal uterine ligaments for its restoration and retention in its normal position the better, so long as they are rational and safe and considered as supplements to instead of substitutes for each other.

2. Every surgeon, whether specialist or general practitioner, intending to operate in such cases owes it to his profession and to his clientele to familiarize himself with all known methods and to be prepared to use any or all or to modify any or all of them to meet the demands of each individual case.

3. The skill and time required to utilize the natural ligaments are not excessive.

4. The formation and utilization of adventitious ligaments within the abdomen should be reserved for cases manifesting special indications.

5. The operations of ventral suspension and fixation should not be performed because of their ease by pseudo-surgeons who could not competently operate by using the natural ligaments.

6. The individual case should determine the method for each tracheloplasty or cervical amputation for the relief of laceration.

7. Only principles, not details, can be definitely described for the plastic repair of the lacerated perineum.

8. Plastic surgery is minor only in its danger to the patient's life.

9. The conservation or restoration of normal pelvic anatomy is the highest function of the gynecologist.

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DISCUSSION

ON PAPERS OF DRS. GOLDSPOHN AND CRAIG.

Dr. C. O. Thienhaus, Milwaukee, agreed with Dr. Craig that for retroflexion of the uterus there are many methods of operation which give satisfactory results, and that the surgeon who has perfected himself in one method and knows not only how to do it, but the indications for it as well, will have excellent results, while others will fail. In the majority of failures it is not the method which is at fault, but the inexperienced operator. Five years ago Dr. Thienhaus advocated the vaginal route and the vaginal fixation either after Mackenrodt's or Dührssen's method for retroflexion of the uterus, and he has had no reason to change his views. Women will consent more readily to operation by the vaginal route, and if this can be performed with the same success and the same immediate and future safety for the patient as by the abdominal route there is no reason why it should not be chosen. By doing a vaginal fixation it is possible to avoid all the objections which are raised to abdominal fixation and suspension, namely, abnormal position of the uterus and the formation of bands, which may cause ileus. Experience, he said, has also shown that when Mackenrodt's or Dührssen's method is used there is absolutely no danger of disturbance during future pregnancies. Dr. Thienhaus has seen eight pregnancies following vaginal fixations which he had performed after Mackenrodt's method (in one case two pregnancies), and in not one of them was there any disturbance attributable to the fixation, during pregnancy or confinement. He does not use the vaginal route for every case of retroflexion. When the retroflexed uterus is imbedded in dense adhesions or when there is sufficient reason to believe that together with a retroflexion of the uterus a disease of the appendix is present he always uses the abdominal route. In 1902 Dr. Goldspohn challenged Dr. Thienhaus to show him literature that would state that Dührssen had so few recurrences. Dr. Thienhaus showed that literature.

Dr. W. O. Henry, Omaha, said that he extends the vesicouterine ligaments upward on the anterior surface of the uterus without dissecting the bladder free from the uterus. The abdomen is opened, all adhesions are broken up, and whatever plastic work is required is done on the appendages, then the peritoneum is carefully scarified in the cul-de-sac between the uterus and the bladder, and the scarification is extended up on the uterine wall in line with the vesicouterine ligaments as far as may be necessary, depending on the size of the body of the uterus, then the bladder is sewed to the uterus for the distance of about one-quarter of an inch with a simple catgut ligature, the vesicouterine ligaments are picked up and sewed to the scarified surface with a like catgut ligature. This simply makes use of Nature's method to hold the uterus forward. Dr. Henry related the case of a young woman who, from pelvic inflammation, had a retroflexed uterus with adhesions. He advised an operation, but it was refused, until five years afterward the patient returned for operation. The abdomen was opened, the adhesions broken up, tubes and ovaries released, and the cysts in the ovaries punctured; the uterus was then brought forward according to the above plan. The woman made a good recovery. Five weeks later a careful examination showed the uterus to be in excellent position and freely movable. Dr. Henry believes that the Alexander and Goldspohn operations are all right in certain cases, but that his method of operation is rational, practicable and applicable in a large majority of cases. He thinks it well after this operation to have the patient lie on the side and face as much as possible until the parts gain their normal tone.

Dr. A. Ernest Gallant, New York, agreed with Dr. Craig that one operation will not suit every case. Experience teaches that any disease or operation which induces adhesions of pelvic organs produces a painful point. Normally the uterus should be capable of elevation of from four to five inches, and the lateral mobility is from two to three inches. The moment adhesions form, either from inflammation or other cause, the least dragging on that point will cause pain; hence Dr. Gallant avoids any operation which will cause restrictive artificial adhesions. For this reason he has avoided shortening the uterosacral ligaments. In his experience as high as 50 per cent. of patients suffer from this cause. In a study of 2,000 gynecologic cases trying to lift the uterus caused pain in 50 per cent. In some cases, of course, this was associated with pus tubes and other inflammations. If the uterus is placed in such a position that it can freely move up and down with every breath, then pain is avoided. In the Alexander operation the uterus is thrown forward and the ligaments shortened to such a point that the uterus by dragging thereon will produce pain. Dr. Gallant has made use of the Alexander operation but once. The number of patients he has seen with inguinal pain after that operation has led him to avoid it. The suspension operations of Ferguson and others are more favorable because while they fix the round ligaments at their middle the elasticity of those overstretched ligaments is such that it will not interfere with the rise and fall of the uterus. Dr. Gallant has seen several cases associated with the Alexander or with a ventral suspension in which there has been painful dragging on the scars. The operation he has used for the past five years is one which he first saw performed by Dr. Jarman. It consists of putting a needle threaded with catgut through the broad ligament, around the middle of the round ligament and stitching it to the peritoneal surface on either side of the median incision. There is no scarification, simply the sutures, two on each side, about half an inch apart. It is a very simple operation and it has been a successful one. In Dr. Gallant's cases the trouble has not recurred so far; one woman has been pregnant twice, and the uterus is still in good position. In thus suturing all that is done is to tip the uterus forward just far enough that intra-abdominal pressure will be exerted on the upper posterior portion of the fundus; and the force will be maintained in the right direction, driving the fundus toward the symphysis.

Dr. E. G. Frisbee, San Francisco, performs an operation which consists of detaching the round ligament at its junction with the uterus. He passes a pair of forceps through the broad ligament beneath the ovarian ligament and tube, seizes the detached round ligament, brings it around back of the uterus, and stitches the end of the one round ligament to the other, first making a slight furrow in the posterior wall of the uterus. He covers all the raw surfaces with peritoneum so that adhesions can not form. This tilts the uterus forward. He has used this method with success for four or five years. Only one patient has been pregnant so far as he knows. The operation can be performed eaily.

Dr. E. F. Tucker, Portland, said that many drugs are recommended in vomiting of pregnancy because many of them are useless, and that in retroversion of the uterus many operations are recommended by different operators, but none of them is perfect. If physicians could make use of Nature's own method to restore the uterus to its position it would be a good thing. There are no ligaments to pull the uterus forward; the forward position of the uterus depends on the erect position of the woman. Animals walking on all fours do not have retroverted uteri. In the child the uterus normally is much higher in the pelvis and has a backward position, which remains, to a large extent, throughout infancy. It does not begin to antevert until the infant begins to walk. The backs of infants are flat, but when they begin to walk the pelvis is tilted forward, the lumbar curve is produced, and the intra-abdominal pressure tilts the uterus forward. Dr. Emmett used to say that the uterus was swung from above, and so it is. There may be a shortening of the broad ligaments so that the uterus will not come down completely. There are congenital cases of retroversion of the uterus. There are hundreds of women with retroverted uteri who do not suffer from this condition. It is not really a disease in itself, but it is the result often of widely divergent causes, and the condition can not be cured unless the cause is removed. By looking into the pelvis when the uterus lies forward it will be seen that the round ligaments run backward, outward and then forward through the inguinal canal. If the round ligaments of a normally located uterus are pulled on the organ will be drawn backward and upward. Dr. Tucker does not think that any of these operations are very good. He does the suspension operation, although it is only substituting one pathologic condition for another.

DR. H. O. MARCY, Boston, agreed with Dr. Tucker that physicians should study pelvic conditions more carefully. Dr. Marcy gave up the Alexander operation long ago, because he was having failures and not successes. He never operates for the replacing of a retroverted uterus without opening the abdomen. The intrafolding of the round ligament may be all one requires, and if they are folded forward the broad ligaments are shortened, thus aiding materially in holding the uterus forward. In quite a number of cases Dr. Marcy has done anterior ventrosuspension, but there is no one method that accomplishes all that is desired.

DR. A. GOLDSPOHN said that it is self-evident that any one of these operations can not suit all cases. He agreed with Dr. Craig that the procedures which he and some of the other speakers have mentioned are supplemental to each other. Vaginal fixation and ventral suspension are so far removed from normal anatomy and physiology, and so far behind other operations in their clinical results, that they stand no comparison at all. The men who have done ventral suspension have been challenged to go honestly after their patients who have borne children, to examine them and to see whether or not the majority of them have not a return of the retroversion. Recently one man did attempt to do this and reported on 445 cases out of about 900 in the Johns Hopkins Hospital, and the results are exceedingly poor. In women who can conceive, not those who can not, the bulk of operators in this country and abroad have practically discarded vaginal fixation and ventrofixation. Dührssen, Mackenrodt and their students, however, still plead desperately for these operations, but that their clinical results are not satisfactory to themselves is evident from their frequent changes in technic. That any man can show ten consecutive cases of vaginal fixation without trouble in confinement and without a recurrence of a retroversion afterward Dr. Goldspohn doubts very much. In a court of law it would not do to say that the uterus in any given case remains in good position, because the patient says that she feels well, and that, therefore, it is not necessary to examine her. Such evidence without an examination is equally inadmissible before the tribunal of science. Dr. Goldspohn said that out of 200 cases, most of them complicated, in which his bi-inguinal operation had been performed, he has now a collection of 155 patients who have been carefully examined after an average interval of twenty months after operation. In all this number there is a return of retroversion in only one case. There is not one hernia, while at least fifteen concomitant herniæ were incidentally cured. Twenty-one patients had given birth to one or more children each, and the only abnormal labor reported was a breech presentation in one case. In none of them was there a return of displacement. On the contrary, the anteversion in these cases after childbirth was generally more pronounced than in the others. This feature has been mentioned by several German operators. In the total of over 288 patients, no case of marked peritonitis, etc., occurred to impeach the intraperitoneal manipulations without sight and without drainage. One death occurred from cerebral embolism. This rare occurrence could take place after the same intrapelvic work performed by any other form of ventral section. One other death occurred from hemorrhage due to slipping of a ligature from the stump of a tube and ovary that were removed on one side. In this case the smallness of the wound may have had something to do with the accident. The resulting mortality of a little less than 1 per cent. is less than would probably have been the case if a regular median section with its consequent greater exposure of viscera had been made. Dr. Goldspohn thinks that the fact that he has only one case of recurrence of displacement in 155 cases, and results otherwise also never before equaled by any one in a similar grade of cases is because he has carefully discriminated and selected the cases suitable for bi-inguinal shortening of the round ligaments, and has performed other operations as well. He always excluded the cases of prolapsed uterus from the bi-inguinal domain, which can not cope with the excessive elongation of the sacro-uterine ligaments in those cases. In women who can no longer conceive, the retroversion, if present, should also be corrected, but it is usually more of an auxiliary surgical act, associated with some other more pronounced indication, and for this purpose any one of the otherwise rational and effective fixation operations may be eligible.

DR. D. H. CRAIG said that the silence of the ardent advocates of ventral suspension and fixation gratified him, while at the same time mortifying him, because either his exposition of their side of the question is not worthy of consideration, or his opinion has been held universally, and shows that his paper was superfluous. He believes that in a few decades ventral suspension and fixation will be considered, except in such cases as he outlined in which they are specially indicated, as we now look on venesection, except in specially indicated cases. The question of the consent of the patient ought not to enter into any consideration of the choice of operation. Getting the consent of the patient depends more on the man trying to get it than on the merits of the operation proposed, and gynecologists ought not to allow themselves to be induced to select a secondary operation unless it is indicated. The question as to the rationality of an operation is not an entity. There are good and bad operations. A bad operation can be so well used as to make it a good operation, and a good operation can be performed so badly as to make it absolutely useless. The personal equation of the operator and selection of cases comes in everywhere. If the operation is not a good one, the gynecologist should study the anatomy and mechanics of the pelvis until he can make a good one. In regard to the question of the holding up of the uterus by a ligament from above, Dr. Craig said that he does not remember when camping out of ever having seen any ropes that held his tent in the air, and the ligaments of the uterus perform the same functions as do the guy ropes for a tent. When normal ligaments can be used to restore a normal condition, the surgeon should not try to improve on Nature, but should follow her as closely as he can. One can improve on perverted Nature, but not on a normal condition. Any operation for retroversion does not produce an immunity in that woman to a recurrence of the retroversion, even if the proper operation has been done. There is as much to be done in teaching the woman how to avoid subsequent retroversion as in correcting it operatively. Dr. Craig does not want to go on record as having the opinion that anything will do for a woman who can not have children. That woman is entitled to as much consideration as the woman who can bear children, and she must be relieved of her pain and discomfort and made as happy and comfortable as any other woman.

CULTURES FROM THE BLOOD IN TYPHOID.

REPORT ON EXAMINATION OF EIGHTY-EIGHT CASES.*

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PITTSBURG.

While scattered reports of the occurrence of typhoid bacilli in the blood of typhoid patients extend over a period of twenty years, it is only within the last five or six years that published accounts of larger series of cases occur, and it remains for the present workers to demonstrate to the practitioner what I believe to be the case, that blood cultures in typhoid fever afford a surer and earlier means of diagnosis than the Widal reaction and are perfectly feasible in family practice.

The earliest publication on blood cultures in typhoid I have been able to find is that of Fraenkel[1] in 1885. This observer in seven cases demonstrated the bacilli in the blood in one case. Twelve years later Künau[2] reported that he had demonstrated the bacilli in eleven out of forty-one cases. In this country Cole,[3] of Johns Hopkins, in 1901, in fifteen cases isolated the bacilli in eleven cases. His earliest case was on the sixth day.

* Read before the Allegheny County Medical Society, 1905.
1. Fraenkel: Centralblatt f. klin. Medicin, 1885.
2. Kuenau: Zeits. f. Hygiene, 1897.
3. Cole: Johns Hopkins Hosp. Bull., July, 1901.

In the same year Auerbach,[4] in Germany, in ten cases, reported positive results in seven cases. His results are remarkable in that he withdrew only from ten to thirty drops of blood for the test, whereas most observers withdraw at least 5 c.c. Hewlett,[5] also writing in 1901, examined twenty-four cases. He does not give the proportions, but thinks that the bacilli are present in the blood in the majority of cases.

Kerr and Harris,[6] in 1902, reported fifty-six cases in which cultures were made. Thirty-one cases were positive and twenty-five negative. They found that in the first week of the disease 87.5 per cent. of the cases were positive; in the second, 70 per cent.; in the third, 50 per cent. They give the general average as 70 per cent.

Courmont,[7] of Lyons, in 1903, in thirty-seven cases, found the bacilli constantly from the first day to the third week. He used fluid cultures and from 2 to 4 c.c. of blood. He found staphylococci in five cases and the colon bacillus in one case. Courmont's belief is that the bacilli are constantly in the blood from the fifth to the twenty-seventh day, but not after the fourth week. Rosenberger,[8] in 1903, in his excellent article on blood cultures, states that in 535 cases collected by him from the literature results were positive in 80 per cent.

The earliest observers used solid media for their cultures. They soon found, however, that it was much better to use fluid media and in such quantity (from ten to fifty times the amount of the blood withdrawn) as to counteract the antitoxic powers of the blood serum.

My own cases in which the blood cultures were taken number eighty-eight. The material was obtained from the medical wards of the Western Pennsylvania Hospital. The patients in these wards are, in the great majority of cases, Italian and Slavish laborers, not speaking English. The fact, together with the ignorance of this class of patients as a whole, makes history-taking extremely unreliable. For this reason I have divided the cases according to temperature at time of test. The rule is for patients to be brought in with a temperature of 103 F. or over and a history of about a week's sickness. My Class A, at 103 F., represents approximately the second week of the disease. I think in no case was a culture made while the temperature was rising before the end of the first week.

The Classes B and C, at 102 and 101 F., correspond to the third week, Class D, 100 F., being somewhere in the fourth week.

The Widal test was positive in all cases but two. In eighteen cases of the series the blood cultures showed bacilli in the blood before the Widal test was positive. In the cases in which the typhoid bacillus was isolated no control cultures were made to exclude the possibility of air contamination.

The eighty-eight cases in which observations were made were routine cases and were not especially typical or severe cases selected for experiment. The mortality was not especially high. Eleven cases were fatal.

The technic I have adopted is to obtain blood from the arm veins in a sterile glass pipette of 10 c.c. capacity by suction with a rubber bulb. A tourniquet is used and the spot to be punctured is touched with pure carbolic acid for a few seconds and then rubbed off with alcohol. The needle I use is a large-sized hypodermic needle, which is thrust through the carbolized area of the skin into the vein; 10 c.c. were withdrawn in almost all cases. In one or two cases lesser amounts were withdrawn; 4 c.c. is the smallest amount in the series. The slight operation takes only about three or four minutes, and the pain experienced is not greater than in the use of the hypodermic needle.

The blood is put into bouillon flasks of 500 c.c. capacity which are kept in the incubator for forty-eight hours before being opened. The bacillus at this dilution (1:50) generally grows in thirty-six hours. In a few cases, however, positive results were obtained only at the end of four days. Growth and agglutination went hand in hand in a number of cultures.

In four cases of the series the typhoid bacilli were non-motile on all cultures. In about one-third of the cases the growth on potato was vigorous and visible.

Class A.—Twenty-one cases; temperature 103 or over; second week of disease.

Sterile	0
Typhoid bacillus present alone	21
Typhoid bacillus present with other organisms	0
Other organisms alone present	0

Class B.—Thirty cases; temperature 102, third week of disease.

Sterile	0
Typhoid bacillus, present alone	25
Typhoid bacillus present with other organisms	5
Other organisms alone present	0

Class C.—Thirteen cases, temperature 101, third week of disease.

Sterile	3
Typhoid bacillus present alone	9
Typhoid bacillus present with other organisms	0
Other organisms alone present	1

Class D.—Ten cases; temperature 100, fourth week of disease.

Sterile	3
Typhoid bacillus present alone	1
Typhoid bacillus present with other organisms	0
Other organisms alone present	6

Class E.—Seven cases; temperature 99, fourth week and after.

Sterile	4
Typhoid bacillus present alone	1
Typhoid bacillus present with other organisms	0
Other organisms alone present	2

Class F.—Seven cases; temperature 98.4 fourth week and after.

Sterile	6
Typhoid bacillus present alone	0
Typhoid bacillus present with other organisms	0
Other organisms alone present	1

From the above table it will be seen that in fifty-six cases in which the temperature was above 102 the bacilli were present in the blood in every case, and that in twenty-three cases in which the temperature was 100 or 101 F. the bacilli were cultivated from the blood in ten cases, or 43 per cent.

AUXILIARY ORGANISMS.

The most interesting result of the examination was the demonstration of auxiliary organisms in the blood stream.

In Class A, in twenty cases, no other organisms than the typhoid bacillus was found.

In Class B, in thirty cases, other organisms were found accompanying the typhoid bacillus in five cases. These organisms were all motile bacilli, decolorizing by Gram's method of staining, and identical in their growth in milk, where strong alkalinity was produced, and in their vigorous, yellow, moist growth on potato. They differed somewhat in growth on agar. None could be agglutinated with serum, 1/20. None produced glass in glucose media. In general they resembled *Bacillus alcaligenes* closely.

In Class C, in thirteen cases, but one organism (*Streptococcus pyogenes*) other than typhoid was encountered.

In Class D, in ten cases, other organisms were present in six cases. Five of these were bacilli corresponding closely to *Bacillus alcaligenes*, though two were non-motile. Cocci (non-pyogenic) were found in one case; *Staphylococcus albus* in one case.

In Class E, in seven cases, two showed other organisms, in one case a motile bacilli and in the other *Staphylococcus albus*.

In Class F, with normal temperature, in seven cases, a white coccus was found in one case.

4. Auerbach: Deutsche med. Wochft., Dec. 6, 1900.
5. Hewlett: Med. Rec., Nov. 30, 1901.
6. Kerr and Harris: Chicago Med. Recorder, Oct. 15, 1902.
7. Courmont: Bull. Soc. Medicale des Hôpiteaux. de Paris, Jan. 2, 1903; Jour. de Physiol. et Path. gén., Jan. 15, 1903.
8. Rosenberger: Proc. of Path. Society of Phila., May, 1903.

SUMMARY.

1. *Bacillus typhosus* is present in the blood in all cases of typhoid fever in the second and third weeks, when the temperature is 102 or over.

2. Bacilli of the "enteric group" of bacteria (*Bacillus alcaligenes*) are present in a considerable percentage of the cases after the second week, at first accompanying *Bacillus typhosus*, then supplanting it.

3. Later in the disease cocci may be in the blood.

4. *Bacillus coli communis* is never present in the blood of typhoid patients.

METHYL ALCOHOL AMBLYOPIA, WITH SPECIAL REFERENCE TO OPTIC NERVE.

REPORT OF CASE.*

C. S. G. NAGEL, M.D.
SAN FRANCISCO.

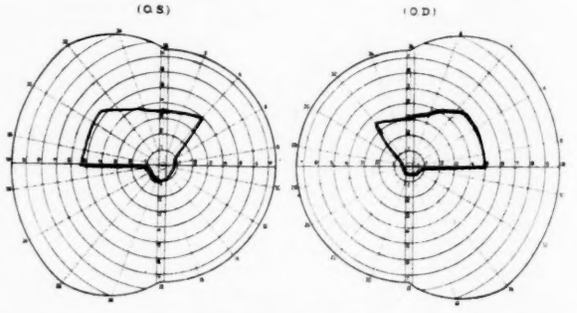
The very meritorious report of Drs. Buller and Wood[1] has absolutely established the specifically deleterious effect of wood alcohol on the optic nerve. Until anatomic findings may give us a better insight into the pathology, cases offering special clinical features seem to me to be worth recording.

Previous History.—It has been my good fortune to come across the patient in Case 80 of the report referred to and to have had this individual under observation for about a year. It is only necessary to recall here that early in October, 1901, this patient became absolutely blind for a number of hours through acute wood alcohol intoxication from imbibing; then a very considerable improvement had been present for some hours, after which blindness had set in again lasting for several days. After improving for a few months, vision had been, on a whole, getting worse ever since. It is noteworthy to quote from Dr. J .F. Van Kirk's report as follows: "This case was characterized by frequent transient changes. The vision would be markedly improved for a few hours and then it would suddenly fail. Often the morning vision would be good, while exercise seemed to increase the amblyopia." The patient further stated to me that he always used to see much worse temporarily whenever discouraged about failure to secure food. He had also had occasionally "fullness of head" and attacks of pain over the head, which felt "tight" from forehead to top, but not farther back.

Examination.—When I first had occasion to examine him (March, 1904) vision was R. 5/15; L. fingers in 0.65 m. Anterior chambers were normal o. u. Left pupil was dilated. T. normal o. u. In each pupil there was slow minimum reaction to light. R. F. V. extremely contracted, from 50 degrees outward over ca. 50 degrees outward and upward, 30 degrees upward and 35 degrees inward—up to 5 degrees for the remaining 5/8 of the field. In other words, over ½ of total F. V. is missing, below and inward, and upward and outward F. V. is contracted. There are small fields for blue, red and green and no central scotoma. L. F. V. is analogous, though uniformly a very little wider, but color perception for blue only. The striking point regarding the fields is the similarity as to the position in each of the parts intact and missing.

Corpus vitreum normal o. u. Ophthalmoscopically, the disc in both eyes is white (atrophic), with well-marked lamina cribrosa, outlines sharp, arteries a very little contracted. There is a halo around each papilla. Each disc shows glaucomatous cupping upward. To do away with one other point, I will say that for some time, during the beginning of my observation, there were apparent, at times, two or three discolored small roundish spots in the macular region of right eye which had created in the mind of another casual observer the impression of impending anatomic changes. During my long observation I have become convinced that such is not the case, and that the changes are confined in each eye to the disc, to its immediate neighborhood and to the vessels.[2]

Treatment and Result.—For reasons which will become clear from the epicrisis, I promptly performed a broad peripheral iridectomy in both eyes. For a short time only (ca. 2 weeks) after operation both pupils became a little smaller. The ophthalmometer showed R. + 1.0 axis 60 temp., L. + 3.0 ax. 75 nas. In the right eye vision remained about the same, in the left eye there was a decided improvement. Fingers were now counted (one week after operation) in 1.0 m., and 3 weeks p. o. in 1.25 m. These results of repeated examinations became the more convincing (as generally in cases of extreme amblyopia) because the patient, in trustworthy statements, had repeatedly spontaneously maintained improvement of vision from his observations in general. As a result of repeated perimetric examinations there also seemed to be a slight improvement in both F. F. V. peripherally. Such was the status to about the middle of April, 1904. Soon afterward, however, and gradually more and more pronouncedly, a decided deterioration set in again. In R. F. V. there soon remained but a small field for blue (only), and besides a perception of green could be found occasionally paracentrally. The left eye has kept a still smaller field for blue up to the end of my observation. F. F. V. could only be taken with finger fixation from about August, 1904. In the beginning of November, 1904, the patient was taken to the City and County Hospital, where a careful general examination by Dr. Schmoll revealed nothing abnormal except induration on one pulmonary apex. The patellary reflexes were rather exaggerated, no Romberg. Urine was normal. While, unfortunately, I find nothing before in my notebook regarding the point, the corneæ are now of subnormal sensibility to touch. Only



fingers are counted in each eye in about 1.0 m. Left pupil was dilated. T. normal o. u.

On November 16, sympathectomy of the left superior ganglion was performed by Dr. Stillman, under chloroform-anesthesia. In taking up the ganglion and at the moment of cutting, a slight pupillary play was noted, there was no marked dilatation. Both pupils were somewhat contracted while the patient was fully under the influence of the anesthetic. Postoperative tension was a little subnormal. Ten hours after operation both conjunctivæ bulbi were congested. L. T. is still subnormal (decidedly less than R. T.). Patient complained of some trouble in swallowing.

L. Pu. < R. Pu. (before operation opposite!).

Nov. 17, 1904; L. conjunctiva bulbi injected (not R.). L. Pu. < R. Pu. L. T. < R. T.

Nov. 19, 1904: L. T. < R. T. though a little higher than so far since operation. L. Pu. < R. Pu.

Nov. 24, 1904: L. T. < R. T. L. Pu. < R. Pu.

Nov. 28, 1904: Stat. id. left eye better sensibility than R.

Dec. 9, 1904: L. Pu. < R. Pu. L. T. Pu. < R. Pu. both physiologic. L. F. V. somewhat wider.

Dec. 12, 1904: Sympathectomy of superior ganglion o. d. (Dr. Stillman); chloroform narcosis. There was no change in pupil during operation. Pupil contracts with excision of ganglion. Some hours afterward R. T. < L. T. R. Pu. < L. Pu.

*Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Buller and Wood: "Poisoning by Wood Alcohol," The Journal A. M. A., Oct. 1, 8, 15, 22, 29, 1904.

2. Koller in Med. Record, July 1, 1905, in a report on wood alcohol poisoning states the same observation, comparing this evanescent feature to *chorioiditis guttata*.

Jan. 7, 1905: T. normal o. u., R. a little < L. R. Pu. a little < L. Pu. Vision to patient seems slightly better," measurably stat. id. Ophthalmoscopically, stat. id. R. F. V. somewhat better.

Whether this improvement (real or apparent) has kept up, I am unable to say, having been on a trip abroad since.

Before entering on a discussion of the special points of interest in the foregoing history, I should like to express briefly my belief that wood alcohol amblyopia sets in at first through a defective local blood supply consequent on disturbances in the general circulation, as they find their clinical expression in weak pulse, slow respiration, sweating, coma, etc. This, at least, seems to me the inference to be drawn from those cases in which a very prompt great improvement of vision had taken place, after the first, often very sudden attack of blindnes, to be followed again by fresh failure of sight gradually leading to optic atrophy. As we know from the experiments of Pohl,[3] who found in the urine the maximum of formic acid, as the product of oxydation of wood alcohol, only after from three to four days, a cumulative effect of the poison takes place the reason, I take it, for the second (eventual) attack of grave amblyopia. The first attack of blindness would then be due anatomically to what Alfred Graefe[4] has described as *Ischæmia retinæ*. It would be of great interest, of course, if ophthalmoscopically contraction of blood vessels could be found during the attack.

Since the prognosis is so very bad, I should advise prompt performance of iridectomy or at least keratomy, in order to lower the intraocular pressure, in acordance with the good results obtained by thus increasing the intraocular circulation in Graefe's and Knapp's[5] cases of ischemia of the retina.

Neither do we know at present how to discriminate between cases in which the first attack of blindness might be overcome spontaneously, and those in which it will not, nor can anyone doubt the lowering effect on the optic nerve of the lessened blood supply, thus predisposing it for the specific effects of methyl alcohol.

If there is any foundation for the theoretic reasoning, I now beg to submit, in conclusion, that a course of procedure, as advocated, might also have a preventive effect in that regard. It is, of course, scarcely necessary to point out expressly that I did not perform iridectomy with any lingering thought for therapeutic effects as considerd so far. As those I have been able to interest sufficiently will have noticed, I had become convinced that in this case a simple glaucoma had developed. My reasons therefor are as follows:

1. The great similarity in both F V, which would be very unusual in optic atrophy pure and simple, and the missing parts being the inner ones.
2. Glaucomatous cupping of discs.
3. Insensibility of corneæ.
4. Indication of halos around papillæ.
5. History of pain (cf. above).

Neither would the absence of (observed) increase of tension necessarily be against the diagnosis of glaucoma simplex, nor am I, on the other hand, indeed, unmindful that the positive symptoms enumerated may not be absolutely convincing to every one, though they have tended to become so to me in this case from the extended observation. I should like to add that the late appearance of central color scotoma in R. E. seems to be rather in favor of the idea of a glaucomatous process complicating the pathologic changes in the optic nerves. Regarding the glaucomatous cupping, I have to add that Leber[6] states that exceptionally the atrophic excavation may assume a form that can not be differentiated from the pressure excavation in glaucoma simplex. Also Stelwag[7] makes the statement that in atrophy of the optic nerve the lamina cribrosa sometimes loses in resistance to such a degree as to recede (*nach hinten weichen*) and thus a deep cupping comes about, in exceptional cases an excavation even with steeper margins, such as develops constantly in glaumoca. Of greatest interest is the history given by Schmidt-Rimpler,[8] which supplies the anatomic proof for such views.

Without any other convincingly glaucomatous symptoms there was found in his case a typical pressure excavation in both eyes. Von Graefe's diagnosis was glaucoma simplex.

Before iridectomy, which had been decided on, could be done, the patient died of pneumonia. Postmortem examination showed both optic nerves throughout their whole course attenuated and flattened. Microscopically there was pronounced atrophy of the nervous fibers, which could be traced still beyond the chiasma into the tractus. The left *papilla optica* (hardened in Mueller's solution) was found to be pushed backward together with the lamina cribrosa. "Here, then, was an excavation showing absolutely the picture of glaucoma and yet being solely the result of the atrophy of the nerve."

Irrespective of the true place of T. P.'s case in reference to the excavation, it is of some value, I think, insofar as it is apt to make us ask whether so-called glaucoma simplex might not come about sometimes under normal intraocular tension if the optic nerve or lamina cribrosa has lessened resistancy. This question has repeatedly suggested itself to my mind when dealing with cases of glaucoma simplex in which there were absolutely no typically glaucomatous symptoms except a "pressure" excavation. In conversing about the point with my former chief, the late Professor Pflüger, whose mind was particularly trained to approach ophthalmologic questions from the standpoint of the physicist, he readily conceded its feasibility. Although Schmidt-Rimpler, as well as Leber,[9] refer in passing to the importance of the relative resisting power of the lamina cribrosa in the formation of a glaucomatous cupping, I know of only one reference in literature having a direct bearing on the point raised.

"Impossible, however, it is not that there are cases where, under the influence of the normal pressure, together with primary inflammation or weakness of opticus, the excavation takes place."[10]

The anatomic discoverer of the glaucomatous cupping of the disc, Heinrich Mueller, discusses in full in his classical treatise[11] the several possible modes of origin for the various forms of excavation of the disc, without, however, referring specifically to the formation of a glaucomatous cupping through normal pressure. He states that normal tension with lessened resistance may "modify the place of entrance." Mueller then refers to Donders as having verbally laid great stress on this

3. "Ueber die Oxydation von Methyl u. Aethylalkohol im Tierkoerper," Arch. f. exper. Pathol. etc., vol. xxxi, p. 281.
4. Arch. f. Ophth, viii, 1, p. 142.
5. "Erblinding durch Netzhaut-ischaemie, etc " Arch. f. Augen u. Ohrenhlkd., v. p. 203-207.
6. Graefe-Saemisch Handbuch d. Augenhlkd., 1, ed., vol. viii, pp. 853-4.
7. Lehrb. d. prakt. Augenhlkd., 4, Aufl., p. 228.
8. Arch. f. Oph. xvii, 1, p. 117.
9. S. Graefe Saemisch, v. 1, ed.
10. Schonte u. Koster: Ergebnisse d Allgem. Pathol. etc. d. Auges von Lubarsch u. Ostertag, p. 403, 1903.
11. "Glaucom und Excavation der Sehnerven, in Gesammelte Schriften, etc.," edited by Otto Becker, Leipzig, 1872.

point. Von Graefe[12] says "if we imagine the substance of the optic nerve loosened (*gelockert*) through some internal process the papilla will give way to the normal pressure in an anomalous way." Later it was Schweigger who in 1891 (cf. Horstmann) insisted that cupping of the disc to the margin may exist without the least demonstrable increase of tension, and that "such a condition might arise from any atrophic disease of the optic nerve when there was previously a physiologic cup." Neither Schweigger nor Horstmann[13] refer to the normal intraocular pressure as the direct cause for such "glaucomatous" cupping in apparently non-glaucomatous eyes.

Schnabel's[14] views regarding true glaucomatous cupping as due to disintegration (Zerfall) of the optic fibers with formation of caverns, and "the glaucomatous excavation is one of these caverns"—are beside the point raised and are merely quoted for completeness' sake,[15] so are also Mueller's[11] conclusions that excavation —in general—might sometimes also be brought about by traction from without through shrinking exudate, etc.

Clearly the point is not of merely anatomic interest; if we could discriminate in glaucoma simplex without increase of tension between cases in which the "glaucomatous" cupping is due solely to simple atrophy, i. e., of fibrillæ and finer septa, and those in which it is the result directly of normal pressure on diseased or congenitally less resistant tissue, it would seem that the vexed question concerning the therapeutic effect of operative measures in glaucoma simplex would become clearer.

DISCUSSION.

DR. E. V. L. BROWN, Chicago, said that the pathogenesis of glaucomatous cupping in optic atrophy was much discussed at last year's meeting of the Vienna Ophthalmologic Society. The position was taken that this does occur in a great many cases without any tension whatever, and is due to the atrophy in the nerve head. Just back of it are found extensive areas of atrophic nerve fibers. Schmidt-Rimpler has also reported some observations on this point.

THE PHYSIOLOGIC ACTION OF DIONIN.*

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Dionin is ethyl-morphin hydrochlorate, and was discovered by Grimaux ($C_{19}\ H_{23}\ NO_3\ HCl+H_2O$). It is a white, odorless, bitter powder, soluble in water, 7 parts; in alcohol, 1.5; in syrup, 20. It is insoluble in ether and chloroform. The aqueous solution is neutral in reaction and keeps a long time. The general physiologic action is similar to that of morphin, but it is claimed that it is less toxic and does not produce nausea, constipation or habit. The respiratory and cardiac centers are unaffected. Applied to the eye, either as a solution or powder, it produces marked sneezing, vasodilation, edema, glandular excitation, burning and lachrymation and supposedly lymphatic extravasation, followed by analgesia, lasting from 2 to 48 hours. Wolffberg[1] of Breslau first used it in ophthalmic practice, but it was Darier's[2] report that brought it prominently before the profession.

The general literature on the drug is enormous, but I have been unable to find any experiments bearing on its actions on tissue and cells. I here cite my own:

Albino rabbit (medium size). Dionin in powder was placed in each eye in larger quantities than would be necessary if the eye was abnormal. The reaction was moderate, giving the usual appearance, only less in degree. The rabbit was killed. The globe and tissue were enucleated and placed in formalin 4 per cent. for 48 hours. Later sections from the cornea, through the ciliary region to the nerve were cut and then put through the usual technic of imbedding, sectioning, staining, etc. Control specimens were made from a normal rabbit's eye. I will here cite the findings:

Slide 1.—Magnification 210 diameters, section through cornea and ciliary region. (Fig. 1.) The lamellar spaces in substantia propria are dilated and edematous. The serous transudate involves the spaces at the junction of the cornea and ciliary region most. Is this not due to the dionin being placed directly over this region?

Slide 2.—Magnification 35 diameters. (Fig. 2.) This is same section under lower power and on close examination it is seen that the effect is greatest on the external side of the cornea and that the muscle is not affected, not even showing edema. Toward the sclera there is slight evidence of hyperemia.

Slide 3.—Magnification 210 diameters. (Fig. 3.) This is a control slide showing normal substantia propria. Compare this slide with No. 1 and see the effect dionin has had in elongating and widening the lymph spaces. In this section the lymph spaces are round, not widened or elongated as in the previous slide.

Slide 4.—Magnification 35 diameters. (Fig. 4.) This is the conjunctiva of a rabbit on whose eye dionin has been applied, suggesting the contention that the tissue changes are found only where there is tension; no edema or round cell infiltration can be found in this slide.

It might be well to introduce here an hypothesis to explain the clinical and microscopic action of dionin and to explain the clinical reports which, on comparison, at times are contradictory. Many slides were examined to arrive at certain conclusions and only the marked features photographed. From these I deduce that the action of dionin is purely local—greatest where the drug has actually rested. Its most marked action is in eyeballs in which the tension is increased, and I believe its entire action can be explained by saying that it has some disassociating action on the intercellular cement substance allowing a transudation of serum from a globe under pressure. That its analgesic action is to be explained by its lessening of tension and thus relieving pain, and by the well-known action of the derivatives of opium. It has been claimed for this drug that it is a lymphagogue, but opium lessens secretions, and the increased flow of apparent lymph, is not lymph, but serum which does not contain cells of any description. Lymph contains colorless blood cells and if the action of dionin was that of a lymphagogue, examination of the tissues would reveal the characteristic components of this fluid. I believe, therefore, that it is only a lymph stimulant secondarily; after the edema the fluid is absorbed as lymph, as it would be in edema from any cause. Careful examination of the slides reveals that locally where the drug is applied there is some change that permits fluid under pressure in the globe to pass through and into the tissue, causing edema and consequent lowering of tension. From these laboratory facts we should expect its action to be most marked in pathologic eyes, and, in these, greatest when the tension is

*Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

12. Arch. f. Ophth., III, 2, p. 547.

13. "Glaucoma Simplex," Arch. of Ophthalm. 33, No. 5.

14. Arch. f. Augenheilkd., 1892, vol. xxiv; Wiener klin. Wochenschr., 1901, S. 469.

15. For a critical review of Schnabel's views see "Ginsberg, Grundriss der pathologischen Histologie" des Auges, Berlin, 1903.

1. Wochft. f. Ther. u. Hyg. des. Auges. vol. III, No. 16.

2. Ophth. Klin., No. vii, 1900.

highest. That its reaction subsequently is lessened rapidly, unless the tension is renewed, is a fact familiar to all who have used dionin.

I wish to enter into detail in a few findings not so generally admitted.

Darier[3] and Reber[4] have each reported cases of complete absorption of the lens and capsule during the use of dionin, and in a case of severe contusion of the eye

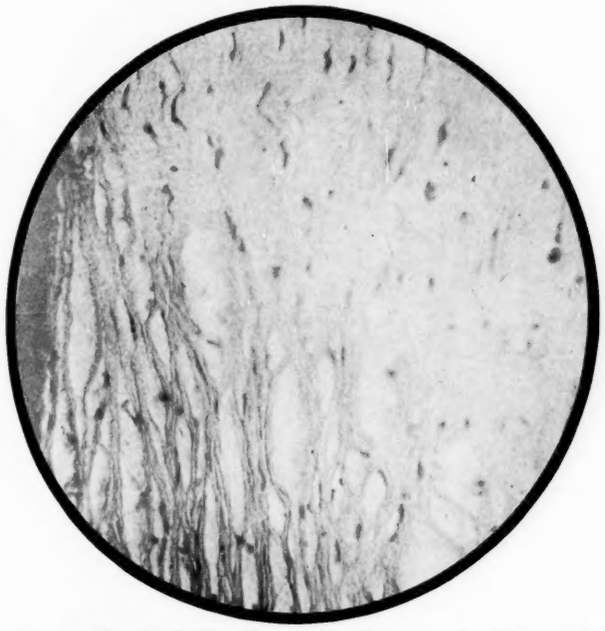

Fig. 1.—Magnified 210 diameters. Cornea and ciliary region showing the lamellar spaces in the substantia propria are dilated and edematous, especially at the corneal junction.

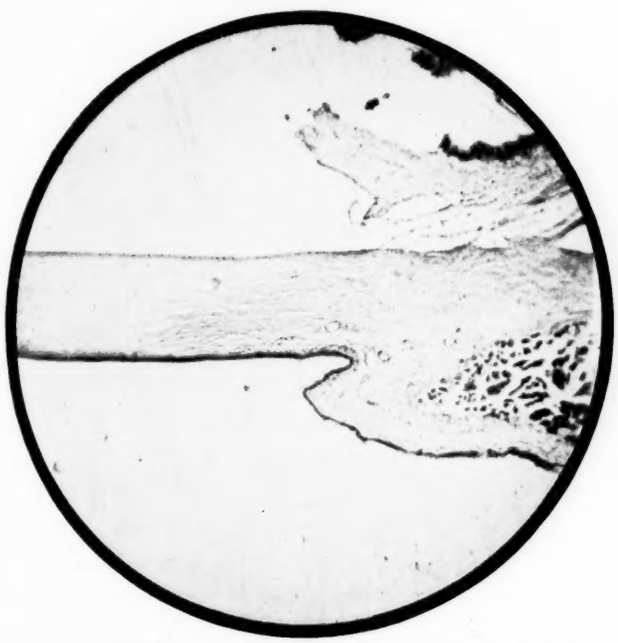

Fig. 2.—Magnified 35 diameters. Same section as in Fig. 1, through lower power. Note that effect on cornea is greatest on the external side. Muscle is not affected. Sclera is slightly hyperemic, showing how purely local is the action.

without penetration this has occurred in my own practice.

History.—Sept. 20, 1904, I first saw this patient and found hemorrhage in the anterior chamber, partially opaque lens—

3. Darier, A.: Clin. ophth., 1899, No. 23; 1900, No. 6. La Clin. Ophthal., Jan. 25, 1904.
4. Reber: Ther. Gaz., Feb., 1904.

tension plus 2. Dionin and atropin were used daily. Each application would lessen the tension and it was used daily as a powder until December 28, when the fundus could be seen.

Condition.—Fluid was vitreous, the iris was dilated and maximum and drawn up in a mass in the inner upper quadrant.

Jan. 29, 1905; this iris had disappeared. Dr. Samuel D Risley has suggested as a possible explanation of the disappearance of the iris in this and similar cases that it inverts or

Fig. 3.—Magnified 210 diameters.—Control slides showing normal substantia propria. Compare with Fig. 1.

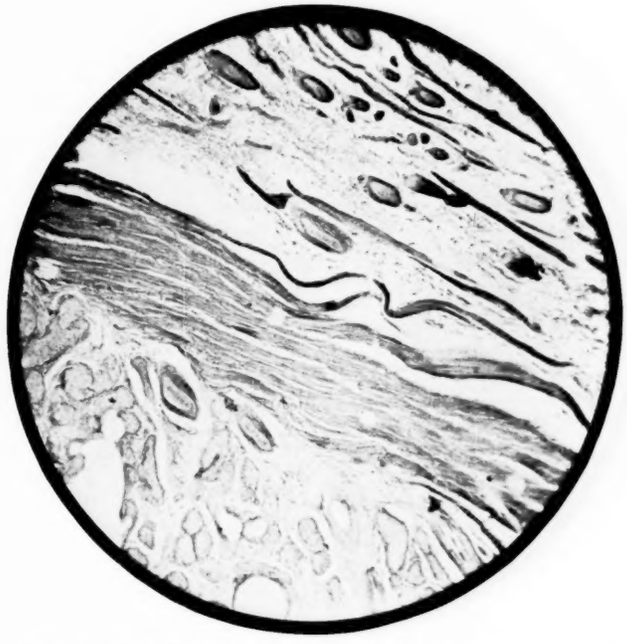

Fig. 4.—Magnified 35 diameters. Conjunctiva in fornix after dionin. No round cell infiltration or evidence of edema.

"umbrellas" over the ciliary processes. Tension was normal, and vitreous fluid.

Later History.—April 2, 1905, a careful examination showed no iris, lens or capsule. With plus 8.00, combined with plus 4.00 cyl. axis 180, vision is 20/40 and a spherical plus 4 added gives Jaeger No. 1 at 17". The reaction to dionin was marked every day, something I have never seen before.

In iritis with adhesions and plus tension the use of dionin lessens the tension and permits absorption of the

mydriatic, and prompt relief of pain and dilation of the pupil results. In corneal ulcers, especially the peripheral type, the repair process begins as soon as the ulcer is cleared. I have observed that the more recent the inflammation and the higher the tension the better the results obtained from its use.

Konigstein agrees with this, as he states: "Dionin is almost completely abortive of parenchymatous keratitis if used in the earliest stages of the disease, but valueless in the late." Curiously enough, Graefe[5] gets "good results in vitreous opacities only when they are of long standing." Bourdeaux[6] and Batalow[7] think it is useful in the later stages of corneal opacity and that they clear up more quickly than without its use. In old cases I have not been so successful, but in recent cases my experience coincides with theirs. Central opacities of the cornea, especially if of long standing and with tension minus or normal are but slightly, if at all benefited in my experience. Von Arlt[8] has treated these patients "as long as 21 months with good results, especially in children." I have not persevered so long. Wolffberg[9] uses this drug in hemorrhagic glaucoma, which is seemingly logical. Bloch[10] states the greatest reaction occurs in pathologic condition. I should qualify this by adding "with increased tension." Sanz Blanco[11] "injects a 5 per cent. solution in intraocular hemorrhages with surprisingly good effects." "In one case the fundus could be seen in 5 days and in 30 days he (the patient) could read."

I have tried it in conjunctival hemorrhage with no reaction to speak of and no beneficial results over the ordinary treatment, evidently lacking the pressure factor. In beginning pannus I have cleared up the cornea and resisted permanent opacity more satisfactorily than with any previous treatment, the lid, of course, being treated for the cause.

In glaucoma, I prefer dionin to eserin, relief from pain being very marked, due, I think, to the mechanical relief from pressure. In old vitreous opacities I have had poor success, possibly because I have not used it long enough. I early abandoned the use of solutions and placed specks of the powder on two or three places on the cornea, especially finding the results better than solutions or applications in one place. This was when I thought the drug a lymph stimulant and is further proof that its action is as suggested in my hypothesis, because the action being purely local the larger number of places acted on the greater the relief from the tension. I wish here to express to W. J. Stone, B.S., M.D., my appreciation of his kindness in assisting me in the preparation of this paper.

DISCUSSION.

DR. E. V. L. BROWN, Chicago, referred to an article recently published on some work done in Breslau in which the author found that dionin had effect only on certain animals; not on all. The animals used were dogs, rabbits and cats, and the cats did not react in any way.

DR. W. H. SNYDER said that in rabbits the effect is very slight. It requires 100 times as much to get a reaction as in the human eye.

5. Graefe, A.: Deut. med. Wochft., xxvi, No. 12.
6. Bourdeaux, B.: Klin. Ther. Wochft., ix, No. 29.
7. Batalow, A. E.: Vratch, 1901, No. 19.
8. Von Arlt, F. R.: Heilkunde, vi, No. 11. Wochft. für Ther. und Hyg. des Auges, No. 11, 1902.
9. Wolffberg, Wochft. f. Ther. u. Hyg. d. Auges, iii, No. 4, Jan. 8, 1903.
10. Bloch, R.: Therap. Monats., viii, p. 418; Heilkunde, vi, No. 11; Deutsche Praxis, 1903, No. 25.
11. Sanz Blanco: Arch. de Ophthal., August, 1904.

Special Articles

MEDICAL AFFAIRS IN THE HEART OF THE ARCTICS.

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The geographic distribution of disease, the study of primitive races, of their climatic conditions, customs, habits and manner of living as etiologic influences, their methods employed in combatting disease and their resources in the treatment of accidents are subjects which can not fail to interest physicians who are concerned in the progress of their profession and the welfare of humanity the world over.

My vacation trip this summer brought me in touch

Fig. 1.—Baffin Land Eskimo.

with, and afforded me an excellent opportunity to study, one of the most interesting peoples in the world, the Eskimos of the far north, in the very heart of the Arctic region. These people are scattered in small settlements along the northern part of the west coast of Greenland, extending from Upernavik to Etah, a distance of about 600 miles. Etah is the most northern habitation of the Eskimos. It is in latitude 78° 40′ N. and is less than 700 miles from the North Pole. It is in the heart of the Arctic region, where so many fearless explorers have spent their long, dark winter night preliminary to the dash for the North Pole on foot and sledges over ice and hummocks of ice. It is here where so many hopes were shattered, where so much suffering was endured and where not a few brave sailors have found a premature grave.

Fig. 2.—Eskimo family.

This unusual opportunity to visit the headquarters, the starting point of the Arctic explorers and the interesting people who live in this remote part of the inhabited world was presented to me through the courtesy of Commander Robert E. Peary, U. S. Navy, the famous explorer of the far North. Dr. Frederick Sohon of Washington, D. C., and myself were the only passengers on the *Erik,* which sailed from Sydney, Nova Scotia, Monday, July 17, with a cargo of coal for the Peary Arctic expedition now under way to the much-sought-for pole. Commander Peary and his crew sailed later from the same port on the *Roosevelt,* and it was understood that we should meet in North Star Bay on or before August 10. The *Roosevelt* met us in that place August 9, and proceeded at once to Etah. Commander Peary came on board the *Erik* to conduct the walrus hunt which was to take place in Murchison's Sound, between the two stations, and to pick up along the coast the Eskimos who were to form a part of the expedition. This trip, as well as the few days at Etah with the two ships lying side by side, gave rise to a good opportunity to become well acquainted with Commander Peary and to receive from him much valuable information concerning the Arctic region and its scanty population of Eskimos. Many of the members of the crews of both vessels were familiar with Arctic conditions and the customs and habits of the Eskimos. From these sources and the results of my own observations I have collected the material incorporated in this paper.

The real Eskimos inhabit the west coast of Greenland, north of the Danish colonies, beyond the limits of civilization. The Eskimos of the Cape York settlement were taken on board the *Roosevelt.* The *Erik* called at all the other settlements and the commander selected his material for the native part of the expedition as we went along, so that practically all of these came under my observation. The final weeding out of the undesirable took place at Etah before the *Roosevelt* sailed for the farthest North, at 3 a. m., Thursday, August 17. Twenty-one persons were left here to establish their winter quarters and to form the base of the expedition. The *Erik* left Etah Wednesday, August 23, with orders to call at Godhavn on the return voyage to St. Johns, Newfoundland, where we arrived September 5.

THE REAL ESKIMOS.

The Eskimos within the limits of civilization, that is, those living in the Danish colonies and settlements, in Baffin Land and Labrador, have lost their original type and have largely abandoned their primitive way of living. Intermarriage with Europeans and Americans for more than a century has resulted in a mixture of races which has either completely effaced the typical Eskimo physiognomy or has, at any rate, modified it so much that it has become almost unrecognizable (Fig. 1). Many of the Eskimos in Danish Greenland would

Fig. 3.—Eskimo woman.

Fig. 4.—Igloo (Eskimo stone hut).

Fig. 5.—Igloo.

Fig. 6. Eskimo man and woman in a kayak.

be taken anywhere for Danes or Scandinavians, so far as their appearance is concerned, rather than for natives of the Arctics. The round, full, flat face has, in the course of many generations, been moulded into a face characteristic of the people inhabiting the countries of North Europe. Blond hair and blue eyes, something never seen in a genuine Eskimo, are by no means uncommon here. In Labrador and Baffin Sound similar changes have occurred in consequence of race mixture. The Eskimos, like other primitive races when brought in contact with foreigners, have a longing to adopt their dress and manner of life, hence those who have lived among them have adopted habits and customs entirely different from those of the untutored, genuine Eskimos.

The real Eskimos are now only to be found in the heart of the Arctic region along the strip of the coast of Greenland that I have indicated. These people live in isolation and what little communication they have with the outside world through polar expeditions has made little if any impression on their manner of living (Fig. 2).

Commander Peary has been among these people a good deal of his time for the last 14 years. He knows them well, can call them by their names and has their unlimited confidence. He knows the history of all of them who are more than 2 years of age. He speaks their language and is perfectly familiar with their habits of life and the few diseases to which they have been subject since he first visited them. He is a very careful observer and his statements can be relied on.

Although the Eskimo race is a distinct one and has little in common with the Indians of North and South America, there can be no doubt of its Asiatic origin. The Eskimos are below average size, thick-set, legs short, face flat, malar bones and cheeks very prominent, well-shaped nose, although in many of them the bridge is somewhat depressed; eyes universally brown, lower jaw well developed, teeth regular, pearly white and in perfect condition; hair straight, coal-black; beard scanty, as well as the eyebrows and eyelashes; eye slit slightly narrowed, not oblique; forehead full and only slightly receding, mouth large, lips thin and fine-cut, color of skin dusky, cheeks florid with a copper tinge, hands and feet small, even delicate. The women are much smaller than the men, many of them being not more than four feet in height. Their garments are made of fur—bearskin for trousers, which are made long for men, short for women; the former wear short, the latter long sealskin boots (Figs. 2 and 3). The coat, with hood, is made of seal or foxskin, the former for summer and the latter for winter wear. Bird skins and the fur of the Arctic hare are worn for underclothing. The native dress is admirably adapted for the climate in which these people live, and Commander Peary has adopted it for himself and wears it summer and winter.

The Eskimos are the filthiest people in the world. They never wash, not even the face and hands. The smell of the fur clothing and secretions of the skin are productive of a stench about their persons and especially in their igloos and tents that is characteristic and at first very obnoxious to the uninitiated. During winter these people live in huts (igloos) (Figs. 4 and 5), of stone or ice; in summer in tents of sealskin. Furs are used for the common family bed and each occupant, from father to babe, strips completely before retiring. They do not marry in the sense in which we use this word, but mate like animals for convenient periods of time, which may be for life, for a year, or only for a hunting trip of a few days. Exchange of mates for an indefinite time is of common occurrence.

These people are all children, contented, peaceable, honest and hospitable; they are without a ruler and without any ambition for fame or power—an ideal socialistic community where property is held in common, politics unknown, and where all are on the same social plane.

They subsist almost exclusively on a raw animal diet, which explains the absence of a number of diseases that are common among the civilized people. Salt water contains iodin, and all animals living in it and all animals which live on sea food absorb more or less of this fickle chemical substance. None of these people has ever suffered from scurvy, which was such a common affection among the crews of the early polar expeditions and which occasionally afflicts the Eskimos who consume more cooked than raw animal food. Peary has profited by this observation, and places great importance in supplying his crew with fresh meat, and has never seen a case of scurvy among them. He has found by experience that lime juice, which formerly enjoyed such an enviable reputation as an antiscorbutic, is not only useless but harmful. Taken in the Arctic region, it acts as a cathartic and becomes distasteful to those who have used it.

The iodized raw animal food also explains satisfactorily the absence of enlarged tonsils, cervical lymphatic glands and goiter. I examined the throats and necks of many Eskimos and found the tonsils and thyroid glands in all of these in a markedly atrophic condition, and in none of them, except in two syphilitics, were there any palpable cervical lymphatics. The perfect, splendid teeth and strong lower jaw are the anatomic points of the carnivorous diet. I examined the mouths of several persons between 60 and 70 years of age and found every tooth in place and firm but ground away by long usage almost to the level of the healthy gums. The vocation of the Eskimos, both men and women, requires very little use of the legs, consequently they have suffered in length while, on the other hand, paddling of the kayak (Fig. 6), throwing of the harpoon and lance and handling of the dog-whip have resulted in the course of centuries in an unusual development of arms and chest.

Although I have no positive information on the subject, I am satisfied that the exclusion of all vegetable food from the diet has shortened the gastrointestinal canal, that the appendix, if present at all, is in the most rudimentary form and that the glands concerned in the digestion of starchy food have become atrophic, while those whose secretion is needed for the digestion of meat and the emulsification of the fats are hypertrophic. The stomach digestion of these people is something wonderful. Indigestion is about as infrequent as in the dog—in fact I believe there is the closest analogy between the anatomy and physiology of the organs of digestion of the Eskimo and the only domestic animal with which he is familiar, the dog. Commander Peary and a number of the men of both crews, who have seen much of Eskimo life, can not remember of ever having seen a case of chronic indigestion, peritonitis, or intestinal obstruction. Hair and fragments of bone taken with the food by the dog occasionally produce peritonitis in this animal, but these mechanical causes for such affections of the intestinal canal are excluded from the diet of the Eskimo. We would naturally conclude that an exclusive

animal diet would cause constipation and a uric acid diathesis with a long train of their remote consequences —headache, insomnia, skin eruptions, gout, rheumatism, etc.—but this is not the case. The large percentage of oil contained in their diet acts as a gentle laxative and protects them against a multitude of ailments which form the major part of the diseases with which the general practitioner has to deal. The Eskimo can eat with relish and without any ill consequences old, stinking blubber that would turn the stomach of a crow and that if eaten by a white man, if he could retain it, would kill him by producing ptomain poisoning.

The skin of the Eskimo, covered with filth and vermin, is remarkable for its smoothness and immunity to skin diseases. The only skin eruptions I have seen among the large number of Eskimos of all ages I examined was a patch of psoriasis over the posterior surface of the elbow of a syphilitic, and a small pustular eruption affecting one ala of the nose in an infant suffering from a nasal catarrh. The very fact that these people fear and avoid the external use of water may account for their freedom from diseases of the skin. The exposure of the hair to the midnight sun for more than three months of the year and the wearing of a loose hood of fur during the winter favors hair growth. Baldness is unknown here and even Time finds it difficult to bleach the coal-black hair and beard. Men and women of 60 and more years show only here and there a gray streak in the luxuriant hair never touched by the comb.

The special senses, except that of smell, are very keen and old age appears to have little if any influence in diminishing the acuteness of sight and hearing. The acuteness of vision for near and distant objects of these people is something that will astonish the visitor. I became aware of this on my hunting trips under the guidance of Eskimos. They could see a hare or a bird far beyond the reach of my vision and could calculate the distance with an infallible accuracy, something no one is capable of doing who is not habituated to the rarity of the atmosphere of the Arctic region.

DISEASES.

It would take much less space to enumerate the diseases to which the Eskimos are subject than to name those to which they appear to be almost immune so long as they live in their own climate and do not deviate from their customary habits of life.

Tuberculosis in any form is unknown among the Eskimos in the heart of the Arctic region. I heard no phthisical cough, saw no emaciated forms nor hectic flush; no cases of lupus, glandular, joint or bone tuberculosis and no cripples except the man who lost part of one foot from frost bite. Experience, however, has shown that as soon as these people are brought to the United States they contract pulmonary tuberculosis of the most virulent form and succumb to the disease in a few months. Of six persons brought to the American Museum of Natural History in New York all contracted the disease and in less than six months four of them were dead, one returned and recovered and one remained in New York still suffering from a more lingering form of the disease. The one who returned to his Arctic home and resumed his former manner of living made a very speedy and permanent recovery, a strong argument in favor of the Arctic region as a summer resort for tubercular patients. The focus of infection created by this patient in the settlement to which he came and where he has since lived has proved harmless during the eight years that have expired since his return.

Rheumatism is one of the most prevalent diseases among the Eskimos. At the North Star Bay settlement I found a man about 35 years of age in one of the tents completely crippled by this disease which, according to Peary, commenced twelve years before. He was lying helpless on his reindeer skin, with every large joint of all the limbs contracted and stiff. The left elbow was swollen, painful and exquisitely tender to the slightest touch. He was smoking and appeared to be not in the least concerned about his helpless condition, as, according to the prevailing custom among the natives, the tribe provided him and his family with food and clothing. Lumbago and sciatica frequently affect in this climate the crews of expeditions and whalers.

Venereal diseases were introduced here by the whites and have become widely diffused throughout the native population, owing to the unrestrained, promiscuous intercourse practiced everywhere. Syphilis pursues a very mild course in the natives. None of the terrible ravages of the tertiary form of this disease, with which we are so familiar, are seen here. I have no doubt that the iodin contained in their food furnishes a satisfactory explanation for this. A well-known Eskimo is known to have contracted the disease eight years ago. He has had no treatment of any kind and is now in perfect health and the father of several healthy, vigorous children. I examined a boy about 15 years of age who was then the subject of secondary lesions. I found mucus patches on the inner surface of the lower lip, general lymphatic hyperplasia but no cutaneous eruptions. The severest case of tertiary syphilis I have seen was in the case of a man about 50 years of age whose woman was infected by a member of an Arctic crew some eight or ten years ago. One of her children of a corresponding age, a girl, is a half-caste, pale and delicate. This man bore all the marks of a syphilitic cachexia; his arteries were atheromatous, a patch of psoriasis affected the posterior aspect of one of the elbow joints and the cervical and epitrochlear glands were very much enlarged. I did not see a single case of saddle-nose, of gumma, periostitis, Hutchinson's teeth or syphilitic alopecia. These facts prove conclusively that syphilis among these people pursues an unusually benign course, for which we must give credit to their liberally iodized sea food. Gonorrhea seems to follow the same benign course. Careful inquiry and abundant testimony from reliable sources combine to show that stricture, orchitis and cystitis do not exist. I questioned Commander Peary and Mr. Henson, his main man, who have spent seven winters among these natives, with special reference to the existence of urinary difficulties among old men. From their accounts it appears that prostatic obstruction does not exist, as they have seen many of the men urinate, and noticed that the stream was large and strong. The sexual life of these people and the iodized food may account for the absence of senile prostatic hypertrophy and its consequences, urinary obstruction and eventually renal disease. I saw one case of gonorrheal ophthalmia of a mild form in an adult and complete corneal opacity of one eye in the case of a young girl, caused undoubtedly by this disease. One man and a woman had each lost an eye from traumatic causes.

Winter Anemia.—The long winter, with its attendant darkness and long confinement in the small, badly-ventilated huts, to which is often added a lack of sufficient food, is productive of anemia and its results, debility, insomnia and nervousness. Commander Peary anticipated this change in the conditions of the blood and the defective nutrition and guards against them by keeping

his crew and the Eskimos as much as possible out of doors and busy, and supplying them with an abundance of fresh meat. He has found this prophylactic treatment equally effective with both contingents of his expedition. The general lack of nutrition during the long winter night is best shown in the case of his little daughter. She was born in Bowdoin Bay, an arm of Inglefield Gulf, in September. Her weight and size remained the same until the sun made his appearance and she was taken out daily in the open air in a dog sledge, when she commenced to grow rapidly and the blush of health and vigor appeared in her face. Nature takes a long rest in the Arctic region and this affects animal as well as vegetable life; the former comes to a standstill, the latter, for the time being, completely suspended. With the appearance of the sun reanimation takes place, which reaches its maximum during the long and uninterrupted reign of the midnight sun. The effect of the midnight sun on vegetation in the Arctic region is remarkable. What takes place in plant growth with us in months is accomplished here in as many weeks. In four to six weeks the flowering plants bud, blossom and mature their seed. Animal life during this time receives the same stimulating benefit from the sun.

Affections of the Nervous System.—Insanity among the Eskimos is unknown. As these people have never been given an opportunity to indulge in alcoholic drinks they are free from all affections due to alcoholism. Smoking is a new vice with them which crept in a few years ago, but as the supply of tobacco is irregular and most of the time scanty or entirely lacking, it has so far produced no ill results. The natives, however, have a strong liking for the weed and when the supply of tobacco warrants it, young and old enjoy the pipe, which makes its rounds if only one is at their disposal. I have seen children on their mothers' backs do their good share in burning up the contents of a pipe. The same causes which combine in the causation of winter anemia result occasionally in producing a nervous condition closely allied to, if not identical with, hysteria. Peary in 1900, on his trip to the northeast coast of Greenland, witnessed this condition and describes it as follows: "When we were drinking our tea one of the younger Eskimos fell in a fit and the others became hysterical. I felt a peculiar dizzy sensation myself. Recognizing the effect of our alcohol cooker in the close atmosphere of the igloo, with every aperture sealed by the newly-fallen snow, I hurriedly kicked out the door and a portion of the front wall. This relieved matters, and I sent three of the Eskimos outside to get the benefit of the fresh air, while I took the two worst ones in hand personally, and finally succeeded in quieting them down. After this they were 'ankooting' all day. The open water ahead of us, the groaning pack beside us, the bad weather and the, to them, mysterious attack of the morning, had combined to put them all in a very timid and unsteady frame of mind" (*McClure's Magazine*).

It is well known that the long winter, with its depressing effects on body and mind, often disturbs the equilibrium of the otherwise well-balanced nervous system of the natives. But the nervousness, or call it hysteria, never becomes chronic, and disappears under more favorable climatic or dietetic conditions. A similar train of nervous symptoms has not infrequently been observed in members of Arctic expeditions who wintered here and the depression in one or two cases has been so grave as to induce the poor sufferers to seek relief by committing suicide. I could not learn of a single case of epilepsy, chorea or apoplexy.

(To be continued.)

IMMUNITY.

CHAPTER XXXI (Concluded).

OIDIOMYCOSIS.

Under the name of oidiomycosis may be included first, the diseases usually called blastomycosis, saccharomycosis and coccidioidal infection, and second, thrush, whether local or generalized.

In 1894 Gilchrist described a skin disease, which has since been known as blastomycetic dermatitis, or blastomycosis or oidiomycosis of the skin. From a second case he cultivated a fungus which at first he was inclined to consider as an oidium but later called a blastomyces. Since that time many similar cases, especially in Chicago and the adjacent territory, have been discovered and reported by Wells, Hektoen, Hessler, Hyde and Montgomery, Ricketts and others. In many instances the specific fungi have been cultivated.

Systemic Oidiomycosis.

Further investigations by Rixford and Gilchrist, Busse, Ophüls and Moffit, Hyde and Montgomery and others have brought to light the existence of systemic infections by fungi which resemble closely those found in blastomycetic dermatitis, and, in fact, cases in which the infection primarily was limited to the skin have gone on to generalized infection. The *Saccharomycosis hominis* of Busse and of Curtis, blastomycetic dermatitis, generalized blastomycosis, and about a dozen cases in California which at one time were considered to be of protozoön etiology (Rixford and Gilchrist), are closely related or identical processes which have as their cause a group of fungi, the individual strains of which may show considerable differences.

Histology.

The skin infection usually appears as a coarse warty and ulcerative lesion, in which the large papillæ and cutaneous areola are beset with minute abscesses; the process extends gradually and eventually may involve large areas. Histologically, the tissue shows an enormous epithelial hyperplasia with intraepithelial abscesses, and a richly cellular, granulomatous condition of the subepithelial tissue, in which giant cells and small abscesses are found. When the disease is systemic, various internal organs, especially the lungs, spleen and kidneys, are the seats of abscesses and nodules which contain the parasites in immense numbers. The lungs show lobular or more extensive consolidation.

Nature of Fungi.

In those cases usually described as blastomycetic dermatitis or systemic blastomycosis, the fungus proliferates by budding, and is found chiefly in the intraepithelial and subcutaneous abscesses, and in the granulation tissue and nodules of internal organs. Its appearance in culture media and its biologic properties are subject to considerable variations, at one time growing as a mold, at another time more like the typical oidium, and again resembling some form of yeast. Ricketts considers that the genus oidium is sufficiently broad to include all the types which have been described, and that blastomyces is too narrow. The organisms which have been cultivated from the cases in California grow as molds, and they differ from those described by Gilchrist, Hektoen, Ricketts and others, in that they form endospores and apparently do not bud in the tissues of the host (Ophüls, Wolbach). Ophüls calls this parasite *Oidium coccidoides*, agreeing with Ricketts as to the generic character of the group.

Infection Atria.

The skin infection occasionally follows slight traumatism while in other instances no predisposing condition is known by the patient. The occurrence of cutaneous lesions in crops has been noted, and suggests that in some instances they may originate as embolic foci from a pulmonary lesion which later heals or becomes latent. In the systemic infection the primary lesion appears to be in the lungs in most cases, from which the blood and other organs, including the skin, may be invaded. Pulmonary oidiomycosis simulates pulmonary tuberculosis. In extensive involvement of the lungs the organisms may be demonstrated in the sputum. At present nothing is known concerning immunity to these infections.

Fungi of the type found in cutaneous or generalized oidio-

mycosis are widely distributed in nature, and the comparative rarity of the disease suggests that their virulence usually is low, or that susceptibility is rare; perhaps both conditions exist.

THRUSH.

Thrush is one form of oidiomycosis and is of particular interest because of the early date at which its parasitic nature was recognized. Langenbeck and Berg, in 1839 and 1841, are cited as the discoverers of the fungus, and they reproduced the disease by inoculations with fragments of the membrane. The parasite was studied a little later by Gruby, Robin and others and the latter gave it the name of *Oidium albicans*. Grawitz obtained it in pure culture in 1877 and demonstrated its pathogenicity for dogs and rabbits.

Cultures obtained from different cases show differences in size, morphology, chemical activities and methods of proliferation, although the variations are hardly so wide as those found in the organisms cultivated from cases of "blastomycosis."

Although thrush usually is considered a rather harmless affection, Virchow long ago showed that its filaments may penetrate the submucous tissues and even into the blood vessels. In rare instances systemic infection, with abscesses in the brain, kidney and spleen, or with consolidation of the lungs, have been noted; in these cases the conditions resemble those found in systemic "blastomycosis."

Systemic Infection.

The healthy person has little or no susceptibility to thrush, although a few cases of infection have been noted in individuals who were otherwise normal. Customarily it attacks only those who are in a low state of vitality, as poorly nourished children or those in advanced age, or those whose resistance is much lowered by some other disease (typhoid, diabetes, etc.).

Phagocytosis of yeast and oidium-like cells takes place when they are placed in the abdominal cavity of experiment animals (guinea-pigs). A number of leucocytes may fuse to form a plasmodial mass around one or more of the parasitic cells. Roger and Noisette caused an increase in the resistance of rabbits to thrush infection by the intravenous injection of small doses of the parasite. According to Noisette, an immune serum agglutinates only the strain used in the immunization.

Phagocytosis and Immunity.

Infections of other animals (horses, cattle) by oidium-like organisms, the trichophyton and other fungi which cause superficial diseases in the skin of man, and other fungi (aspergillus, mucor), which occasionally are pathogenic for man, will not be discussed.

CHAPTER XXXII.

ANTHRAX.

From the standpoint of infection and immunity anthrax is of particular interest. It is the first disease of which the bacterial etiology was proved and in which the specific microbe was used in pure culture for the production of artificial immunity (vaccination).

Anthrax is particularly a disease of cattle and sheep, and it prevails in certain European countries, especially Russia, in Australia and in South America. It does not occur extensively in this country. Definite regions are at times heavily infected, and it is in such localities that the disease is most frequently transmitted to man.

As early as 1850 Rayer and Devaine, also Pollender, had discovered the presence of small rods and filaments in the blood of animals which had died of anthrax, and the work of Koch, Pasteur and others soon established that this rod, the anthrax bacillus, is the cause of anthrax. The discovery of Koch that the bacilus forms extremely resistant spores, explained the persistance with which the disease infects particular localities.

Bacillus Anthracis.

The anthrax bacillus is a fairly large organism, is rod-shaped, non-motile and grows with characteristic appearances on various culture media. With the proper temperature and culture medium, and in the presence of free oxygen, the formation of spores begins after about twenty-four hours of growth. Their evolution is complete in from one to two days, and eventually the protoplasm of the cells disintegrates and the spores are set free. Spores are not formed in the body of an infected animal. Anthrax prevails especially in the spring and summer, and the bacilli as they are discharged with the urine or feces find in the open air and warm temperature conditions which are favorable for the formation of spores. Spore formation is not essential, however, for the continued life of the organism; at high temperatures (42 C.), and in the presence of minute amounts of acids and alkalis or of carbolic acid, strains may be so altered that they lose permanently the ability to produce spores. Under favorable conditions the spores germinate completely in from three-quarters to one and one-half hours (Grethe) by a process in which they lose their refractive appearance and assume first an oval and then a rod shape. In the body a capsule surrounds the bacillus, and it grows singly or in very short chains; in culture media it is very difficult to obtain capsules. The long threads which appear in culture media, especially bouillon, are not found in infected animals.

Spores.

The bacillus itself shows no unusual resistance, but its spores are more resistant than those of any other pathogenic bacterium. When dried on a thread they have been known to live for from ten to twelve years. Corrosive sublimate (1-2,000) kills them in forty minutes (Fraenkel), and direct sunlight in about 100 hours (Momont). *Bacillus pyocyaneus*, streptococci, staphylococci and the bacillus of Friedlander are said to antagonize its growth.

Resistance and Virulence.

The anthrax bacillus is remarkable for its infectiousness. A twenty-millionth of a loop of a virulent culture will cause a fatal infection in mice, guinea-pigs and rabbits, when given subcutaneously. A systemic infection may be produced by feeding the spores or causing animals to inhale them. The gastric juice is able to kill the bacilli, but not the spores, which germinate after they reach the intestines.

The organism is distributed by the excretions of diseased animals, and after their death the adjacent soil becomes heavily infected by the discharges which escape from the intestines and bladder. In this situation the bacilli pass into the sporing stage, in which they remain viable and virulent for a long time.

The infection of herds usually is accomplished by the ingestion of spores which have been distributed in this way, the spores germinating after they have reached the intestines as described above. The disease may be primary in the skin in the form of malignant pustule. In man malignant pustule is the commonest type of infection, occurring especially among those who have to do with cattle and sheep. The bacilli, however, may gain entrance through the lungs as in the so-called "wool-sorter's" disease, which is caused by the inhalation of infected dust from the raw material.

Infection Atria.

The generalized infection in all animals is rapidly fatal (one to three days), and the occurrence of death is sometimes so sudden as to be called apoplectiform; in man the mortality is about 50 per cent. Malignant pustule runs a more favorable course.

The general infections are marked by symptoms of intense intoxication and acute degenerative changes are produced in the parenchymatous organs. Massive numbers of the bacilli are found in the blood. Neither a soluble toxin nor an endotoxin characteristic for the organism has been demonstrated up to the present time (Sobernheim), although there is abundant clinical and anatomic evidence of intense intoxication. The production of mechanical injuries by the large masses of bacilli in the circulation is doubtful.

Toxin!

Rational prophylaxis involves the proper disposal of the bodies of animals which have died of anthrax, the exclusion of animals from fields known to be infected, suitable disinfection of stalls, and finally protective inoculation against the disease. No part of the anthrax cadaver should be used for commercial purposes because of the danger of infecting those who work

Prophylaxis.

with the raw materials. Cleanliness and the usual precautions against contagious diseases should be observed by those who are exposed to infection, bearing in mind that the disease may be transmitted by way of the lungs and alimentary tract as well as by the skin.

Natural Immunity and Susceptibility.

It is probable that no disease is more perplexing from the standpoint of immunity than anthrax. The variations in susceptibility and immunity among different animals are extreme: Guinea-pigs, rabbits and mice are probably more susceptible than sheep and cattle; compared with these the dog and rat are relatively immune, whereas fowls and cold-blooded animals can be infected with difficulty. Although the microbe is readily killed by suitable serums (rabbit, e. g.), such an effect is not an index of immunity. The serum of the highly susceptible rabbit is strongly bactericidal in test-glass experiments, whereas that of the more resistant dog, or rat, has little or no bactericidal power. Because of this inconsistent relationship of the serum to immunity, and since the leucocytes have a high phagocytic power for the anthrax bacillus, Ptruschky, Frank and others, agree with Metchnikoff in assigning variations in the natural immunity of different animals to variations in phagocytic power. Bail and Pettersson, in extensive experimental work, discovered conditions which, they believe, explain the lack of correspondence between serum properties and natural immunity. In the serum of the relatively immune dog and chicken they found bactericidal amboceptors but no complement; hence the serum could show no bactericidal action in the test glass. If, however, leucocytes from the same animals were added to the serum, the latter became bactericidal. It may be assumed that in the course of infection the amboceptors are activated by complement which is discharged from the leucocytes. The failure of the bactericidal substances of the rabbit's serum to protect the animal was ascribed to the ability of the tissues to absorb the amboceptors (cited from Sobernheim). Their work is of sufficient importance to demand repetition.

Wright has shown the importance of the opsonins for phagocytosis of the anthrax bacillus.

Recovery from spontaneous infection is said to confer a certain degree of immunity of some duration.

Artificial immunity may be produced by active or passive immunization.

Vaccination.

The first attempts at vaccination were made in 1880 by Toussaint, who injected the blood of infected animals after it had been heated to 55 degrees for ten minutes. The bacilli were thus attenuated, but they were able to form spores subsequently and vaccination was not always successful. Pasteur used two vaccines. Vaccine I consisted of a culture which was attenuated by a growth at 42 C., and which contained no spores. Vaccine II was a virulent culture, and was injected in from ten to fourteen days after vaccine I. Its use is said to have caused a decrease in anthrax in heavily infected districts, with a consequent decrease of the disease in man. Various modifications of the vaccines of Pasteur have been devised by others, and they seem to be equally successful. In some instances killed bacilli and the products of bacterial growth have been used with less success. The *Anthracase-Immunproteidin* of Emmerich and Löwe is not of established value.

Serum Therapy and Prophylaxis.

Immune serum for therapeutic purposes is prepared by immunization, first with killed or attenuated cultures and then with virulent strains. The two vaccines of Pasteur may be used. Although the serum has been shown to have fairly strong protective powers, it is of less value when used for curative purposes. It produces no effect after the blood stream has been invaded by the bacilli. Its greatest value is in the prophylactic injection of herds when anthrax has declared itself. In man it has been used chiefly in the treatment of malignant pustule in which the prognosis, even without specific treatment, is not unfavorable. The best known serums are those of Sclavo, prepared from the goat and ass, of Mendez and of Deutsch. The properties on which the value of the serums depends are unknown. Sobernheim is very positive in stating that the bactericidal power of an animal's serum is not increased by immunization or infection, and the existence of an antitoxin is not recognized. As in some other instances immunization may cause an increase in opsonins which would render the serum effective by its power to cause increased phagocytosis.

Mixed Immunization and Agglutination.

The method of Sobernheim, that of mixed active and passive immunization, seems to be successful as a prophylactic measure. The vaccine consists of a mixture of antiserum and bacilli. Immune and even normal serums at times may agglutinate the anthrax bacillus, but the reaction is inconstant, and the ability of an immune serum to cause agglutination is no index of its protective power. Agglutination is somewhat difficult of determination because of the tendency of the bacillus to grow in the form of chains.

RELAPSING FEVER.

The Parasite.

In 1868 Obermeier discovered in the blood of patients suffering from relapsing fever, "very fine threads exhibiting motility"; these "threads" have since been known as the *Spirochete obermeieri*,* and are recognized as the cause of the disease. They are very thin (about 1 micron), from 10 to 40 microns in length, and of spiral form. Three types of motion are described: a screw-like, a forward and backward movement and a lateral bending. They are found only in the blood and blood-forming organs. They disappear from the blood with remarkable rapidity at the time of crisis, although they may be found in the spleen one or two days later.

The spirillum has not been grown artificially, but it may be kept alive for a number of days in the blood or serum of patients. As the micro-organisms die agglomerations are formed and they undergo granular changes.

Transmission.

The organism is not found in Nature, and since it occurs only in the blood of the sick, it has long been assumed that infection can be accomplished only by the inoculation of infected blood. The parasites have been demonstrated repeatedly in bedbugs which are found on the mattresses of the sickbed and monkeys have been infected by inoculating them with the blood found in the bodies of these insects, and by the bites of the latter (Tictin). It is said that they may remain alive in bedbugs for as long as thirty days. It is not altogether excluded that other vermin also transmit the disease.

The spirillum does not appear in any of the excretions, unless they happen to be of a bloody character.

Certain monkeys, those belonging to the slender nosed family (*Catarrhinæ*), may be infected by injecting the blood of patients, provided the blood used is taken during the paroxysm, i. e., at a time when the microbes are known to be in the blood. Monkeys do not contract the disease under natural conditions. Other animals are not susceptible. The incubation period in man usually is from five to seven days, and in monkeys from one and one-half to four days. Cloudy swelling of the parenchymatous organs, ecchymoses and infarcts of the spleen and kidneys are found in fatal cases; these are not specific changes, however.

Prophylaxis consists in isolation of the patient, cleanliness, and the destruction of vermin, especially bedbugs.

Relapsing fever occurs in various races of man, and so far as known none are immune.[1] The natural immunity of other animals is referred either to phagocytosis or to normal bacteriolysins, but the conditions probably are not thoroughly understood.

As stated above, a remarkable feature in the course of the disease is the rapidity with which the micro-organisms disap-

* This organism is sometimes called a spirillum, incorrectly. The spirillaceæ, Migulas third family under the Order of Eubacteria, comprises organisms with these characteristics: "Cells which are twisted screw-fashion or represent a segment of a spiral. Division takes place only in one direction of space following elongation of the cell." The difference between spirillum and spirochæte is shown by the following: "3. Genus: Spirillum. Cells rigid, with polar tufts for the most part bent in the form of a half-circle as organs of locomotion. 4. Genus: Spirochæte. Cells with snake-like bending, organs of locomotion unknown."

1. According to Osler the disease has not been seen in this country since 1869 when it was epidemic in New York and Philadelphia. This was before the discovery of the spirillum.

pear from the blood at the time of the paroxysm. Metchnikoff refers this to phagocytosis by the microphages, which undergo a progressive increase during the paroxysm and decrease after the crisis. Very little phagocytosis appears to take place in the circulating blood, but in the spleen many spirilla are found within polymorphonuclear leucocytes. Tictin also found them in the parenchymatous cells of the kidney, liver and lungs. Phagocytosis is most marked at or near the time of the crisis. According to Metchnikoff, the relapse or reinfection is accomplished by spirilla which again invade the body from the spleen.

Phagocytosis and Bacteriolysins.

Russian observers have studied the development of a specific bactericidal power in the serum of the sick and in animals which were immunized by the injection of infected blood from man. Inasmuch as the organism can not be cultivated, bactericidal tests must be performed with the organisms as they occur in the blood or serum of the patients, and Gabritschewsky has devised a technic for this procedure.

A drop of serum from an immune animal or a convalescent patient is mixed on a slide with a drop of serum which contains the spirilla, the latter serum being taken from a patient during the paroxysm. The preparation is sealed under a coverglass and examined at intervals, and the death of the organisms is determined by their loss of motility. It is said that the bactericidal power of human blood following infection, and that of immunized animals, is increased.

Technic.

In view of the facts that three or more relapses may occur and that reinfection is possible at a later period, it seems probable that man does not readily acquire immunity to the infection, although second and third relapses are said to be lighter than the first paroxysm. Monkeys which have been artificially infected several times acquire some resistance to the disease. The view of Metchnikoff that the spleen is essentially involved in recovery and immunity seems to have been disproved by the experiments of Tictin, who found that splenectomy had no influence on recovery or the development of immunity.

Active and Passive Immunity.

The serum of convalescents affords a certain degree of protection to the monkey (Gabritschewsky). Löventhal utilized the serum of immunized horses in the treatment of the disease in man, and reported a decrease in the number and severity of relapses. The action of the serum has been referred both to its content in bactericidal antibodies, and to its ability to stimulate phagocytosis.

Melkich states that agglutinins are formed and that they appear from the third to the fifth day of the disease.

A rapidly fatal disease of geese, spirochete septicemia, or spirillosis of geese, is caused by an organism which resembles the spirochete of Obermeier, and a similar infection has been noted in chickens in Brazil and in cattle in the Transvaal.

MALTA FEVER.

Malta, Mediterranean or undulant fever was discovered in the Island of Malta, is seen among British troops at Gibraltar, and cases have been discovered in the Carribean Sea, Porto Rico, in Hongkong and in Manila. It is said to be extending. The disease usually runs a long course, which is somewhat typhoidal in character, and there may be one or more relapses. The spleen is enlarged, but the intestines are not involved.

Bacillus melitensis, discovered by Bruce (1887) in the spleen of patients who had died of the disease, is a minute organism, slightly oval in shape and non-motile. It has not been found in the blood.

The bacillus is found in pure cultures in the spleen, which is greatly enlarged. Its growth in culture media is very slow.

It is thought that infected water may be one means of transmission of the disease. Laboratory infections have occurred through small wounds. The disease is not transmitted from person to person.

Up to the present time the monkey is the only animal known to be susceptible to artificial infection, although the organism may have a low degree of virulence for rabbits and guinea-pigs (Durham).

One attack confers immunity, which may disappear, however, after some time (Hughes).

Agglutinins, having a value of from 1-300 to 1-500, develop fairly early in the course of the infection and the agglutination test has been used successfuly in diagnosis.

An immune serum which was prepared by Wright is said to influence favorably the course of the disease.

Clinical Reports

QUININ AND IRON IN PNEUMONIA.

CHARLES F. NIEDER, M.D.
GENEVA, N. Y.

The results obtained by Dr. Galbraith,[1] of Sonora, Mex., in the treatment of pneumonia by the use of large doses of quinin sulphate and of the tincture of the chlorid of iron, as shown by the effect on the temperature, pulse and circulation, seemed to be of even greater importance than the fact that he had treated fifty consecutive cases without a death. Since reading Dr. Galbraith's last article I have treated six patients with lobar pneumonia in like manner, with very satisfactory results in every case.

CASE 1.—J. H., aged 46, laborer, was taken ill March 8, 1905. He complained of severe headache and pain in the right side of the chest.

Examination.—Temperature, 102; pulse, 96; respiration, 28. Percussion of chest was negative. Breath sounds were suppressed on the right side. On March 9, at 10 a. m., temperature was 104.6; pulse, 120; respiration, 36. Percussion showed congestion of the lower lobe of the right lung. Pain in side was very severe. Expectoration was bloody.

Diagnosis.—Pneumonia.

Treatment.—Forty grains of quinin were administered, and two hours later fifteen grains were given, followed by ten drops of the tincture of the chlorid of iron every two hours.

March 10: At 9 a. m., temperature was 100; pulse, 94; respiration, 32. There was consolidation of the lower lobe of the right lung.

March 11: At 10 a. m., temperature was 101; pulse, 96; respiration, 34.

March 12: At 9 a. m., temperature was 101; pulse, 94; respiration, 35.

March 13: At 10 a. m., temperature was 104.5; pulse, 115; respiration, 54. There was consolidation of the whole of the right lung and of the lower lobe of the left lung. The patient was very drowsy. Forty grains of quinin were given at 12 m., thirty grains at 2 p. m., and thirty grains at 8 p. m.

March 15: At 8 a. m., temperature was 101; pulse, 92; respiration, 42.

March 16: At 9 a. m., temperature was 98.6; pulse, 88; respiration, 40.

March 17: At 10 a. m., temperature was 99; pulse, 82; respiration, 28.

CASE 2.—D. Q., aged 38, moulder, was taken ill Sept. 6, 1905. He sat near an open window while perspiring freely on September 4. He had a very severe attack of pneumonia nine years ago.

Examination.—On September 6, at 8 a. m., temperature was 104; pulse, 125; respiration, 32. Percussion was negative. Breath sounds were suppressed over the lower lobe of the right side. The patient complained of severe pain in the right side.

Diagnosis.—Pneumonia, involving the lower lobe of the right lung.

Treatment.—Forty grains of quinin were administered at 8 a. m. and thirty grains at 4 p. m., followed by ten drops of the tincture of chlorid of iron every three hours.

September 7: At 9 a. m., temperature was 99.4; pulse, 86; respiration, 32. There was consolidation of the lower lobe of the right lung and severe pain in the right side.

September 8: At 9 a. m., temperature was 101.6; pulse, 92; respiration, 36. Twenty-five grains of quinin were given.

1. The Journal, July 9, 1904, and Jan. 28, 1905.

September 9: At 9 a. m., temperature was 100; pulse, 78; respiration, 34.

September 10: At 10 a. m., temperature was 98.8; pulse, 75; respiration, 28.

September 11: At 10 a. m., temperature was 99.5; pulse, 76.

September 12: At 10 a. m., temperature was 98.4; pulse, 72.

CASE 3.—A. P., aged 41, molder, had had a cold for one week. He was taken ill Sept. 12, 1905.

Examination.—On September 12, at 8 p. m., temperature was 104; pulse, 120; respiration, 35. His breathing was labored. There was no pain. Auscultation showed breath sounds suppressed over the lower lobe of the right lung, and percussion indicated congestion of the same area. The patient was very drowsy.

Diagnosis.—Pneumonia.

Treatment.—Thirty grains of quinin were administered at 8 p. m. and thirty-five grains at midnight, followed by ten drops of the tincture of chlorid of iron every three hours.

September 13: At 8 a. m., temperature was 99.8; pulse, 88; respiration, 32. There was severe pain in the right side, and the man was raising bloody sputum.

September 14: At 9 a. m., temperature was 100.4; pulse, 88; respiration, 34. There was consolidation of the lower lobe of the right lung.

September 15: At 9 a. m., temperature was 101.5; pulse, 90; respiration, 30.

September 16: At 10 a. m., temperature was 101.8; pulse, 90; respiration, 32. Twenty grains of quinin were given.

September 17: At 9 a. m., temperature was 100.6; pulse, 86.

September 18: At 9 a. m., temperature was 99; pulse, 78.

September 19: At 9 a. m., temperature was 100; pulse, 80.

September 20: At 9 a. m., temperature was 98.4; pulse, 74.

Remarks.—The results obtained in my other cases have been just as satisfactory as in these three cases.

With the exception of Case 1, at the time of the extension of the pneumonia to the other lung, none of the patients had a temperature exceeding 102 nor a pulse rate exceeding 96 after beginning this treatment.

What I wish to emphasize most is the effect of this treatment on the circulation. Instead of the high tension pulse which is usually present in pneumonia, the pulse was of nearly normal tension and of good volume. When there was cyanosis it was promptly relieved.

I trust that others will publish their results with Dr. Galbraith's treatment, so that we shall be able to arrive at a correct estimate of its value.

My experience is too limited to form satisfactory conclusions. Still, I am led to hope that the general use of this treatment will cause a great reduction in the mortality from pneumonia.

REPORT OF A CESAREAN SECTION.

JAMES W. ROWE, M.D.

Adjunct Professor of Obstetrics, University of Cincinnati.

CINCINNATI.

Previous History.—The patient was 26 years of age and weighed 96 pounds before the uterine contents were removed. She asserted that, when 2 years old, she was very sick with a fever, after recovering from which she did not walk for over a year. She was perfectly normal at birth and grew until 5 years old; since then she has grown broader, but very little taller.

Examination.—On examination the patient was found to be 41 inches in height. The head, face and neck were normal and the intelligence above the average. The trunk was small, but not especially deformed. From the spine of the seventh cervical vertebra to the tip of the coccyx measured 20½ inches. The extremities were markedly short, stumpy and deformed. The arm from the shoulder to the tip of the middle finger measured 14 inches. The legs were approximately 16 inches long.

Pelvis: The pelvic measurements were as follows: Between spines, 19.7 cm.; between crests, 21.8 cm.; between trochanters, 25.2 cm.; external conjugate, 14.7 cm. The true conjugate of the brim was estimated to be 6.5 cm.

History of Labor.—The patient last menstruated Nov. 23, 1904. On Sept. 11, 1905, labor began. I first saw the case on September 12 after she had been in labor twenty-four hours. At this time the os was as large as a quarter and the presenting part lay very high. Position and presentation were normal and the child was alive.

Operation.—The section was made following the usual technic. The uterine incision was made vertically through the anterior wall of the organ and, unfortunately, went through the placenta, so that it was necessary to work rapidly. After removal of its contents the uterus was closed with heavy catgut sutures one-third of an inch apart and extending through the entire thickness of the uterine wall, except the mucosa. Between these more superficial and finer sutures were placed to approximate the edges of the wound. A piece of gauze, the end of which extended through the os into the vagina, was left in the uterus. The abdominal wound was closed with three tiers of sutures. The gauze was removed *per vaginam* after twenty-four hours.

Result.—The patient recovered most uneventfully. Lactation began promptly and the baby flourished from the start. It weighed seven pounds and ten ounces. Mother and child were discharged after twenty-five days.

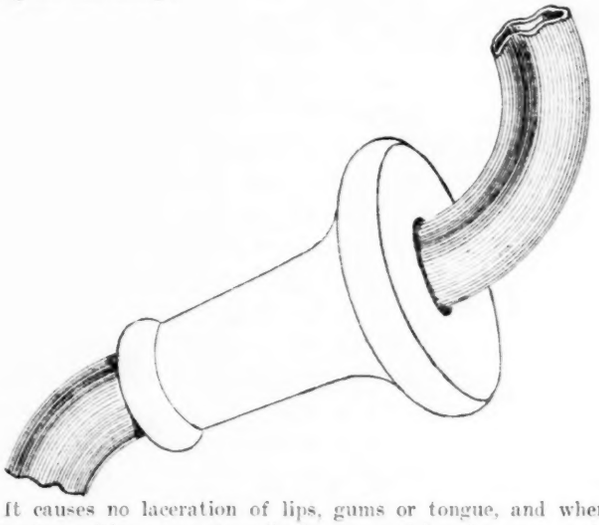
New Appliance

COMBINED MOUTH GAG AND STOMACH TUBE PROTECTER.

LAURENCE M. HYNSON, M.D.

WASHINGTON, D. C.

While resident physician at the Emergency Hospital in this city several months ago and having occasion to use the stomach tube in a great number of emergency cases brought into the hospital suffering from the effects of poisonous substances (taken for suicidal intent and otherwise), acute alcoholism, indigestion, etc., and finding in many of these cases the use of the mouth gag unsatisfactory, inasmuch as it was with the greatest difficulty that one could retain the gag in position with obstreperous patients, I was led to devise a simple instrument or bobbin which has proved to be very effective and which has the double feature of being mouth gag and stomach tube protecter combined. I made and used a mouthpiece of hard wood, as shown in the accompanying diagram, for the first time Sept. 6, 1904, and on subsequent occasions to great advantage.



It causes no laceration of lips, gums or tongue, and when once in position can not easily be removed by the movements of the patient's head or body. With one hand the operator holds both tube and mouthpiece in position, giving freedom of the other hand for the funnel end of the stomach tube. The gag has now been in use for several months at the Emergency Hospital of this city.

Those used so far have been made of hard wood, principally ash and hickory. The illustration is full size.

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BIOGRAPHICAL CARD INDEX AND DIRECTORY.

Since the American Medical Association began the work of accumulating personal information from the members of the medical profession for the biographical card index and the American Medical Directory, many inquiries regarding these new lines of activity have been received. Physicians all over the country have asked, "What is the biographical card index and what is its purpose? How will the American Medical Directory differ from other medical directories?" The following is presented to answer these and other questions relating to the subject and to obviate the necessity of replying to each individual inquiry.

In order to understand the object of this work, it is necessary to examine carefully the present condition of the medical profession from a social and economic standpoint. The last century, and particularly the last twenty-five years, have witnessed a remarkable progress in medicine and in the allied sciences. This progress will unquestionably continue, and the army of observers and investigators now at work in every branch of medical science can safely be trusted with the technical side of a physician's work. But all thoughtful members of the profession admit that there are many practical questions relating to the training, the work and the life of the individual physician, as well as to the community in which he lives, that require careful study and consideration, as well as intelligent and conservative regulation. The improvement of the preliminary training of prospective medical students, of medical schools and of medical courses; higher standards for licensure by state authorities; reciprocity and mutual co-operation between state boards; protection of the ignorant and the sick from the quack, the faker and the charlatan; improvement of the social and financial conditions of the physician; stimulation of the desire to improve his own condition and to increase his knowledge and usefulness —all these much-needed lines of agitation and reform are blocked in the beginning by a lack of knowledge regarding the individual members of the medical profession.

As already stated, detailed information in all technical lines has increased a hundred-fold in the last half century. Along practical and sociologic lines, there is little more known than there was fifty years ago. No one knows how many individuals are at present engaged in the practice of medicine in the United States. Estimates vary from 110,000 to 140,000. Of this indefinite number, no one knows how many are properly licensed by the licensing body of the state in which they live. In many states, owing to the condition of the records, the state board itself can not tell whether a certain individual has a right to practice medicine or not. Information obtained by one state board at considerable expense and trouble is not utilized by others. Knowledge possessed by one society is not shared with other societies. Statements regarding college and year of graduation, as well as regarding state licensure, are in many cases most difficult of verification. If one desires data regarding a physician, there is no central bureau that can furnish it to him, no general clearing-house for information. Licensing bodies are continually met by the fact that they are unable to obtain reliable information whereby they may verify statements made by an applicant. There is not in existence to-day a list of the physicians of the United States whose legal qualifications to practice medicine have been verified. Out of the fifty-four state and territorial licensing bodies, only twenty-one have ever published a list of physicians legally qualified to practice medicine within their jurisdiction.

Information regarding members of the profession is difficult to obtain when desired for identifying, locating or tracing an individual physician for personal notices, biographical sketches, obituary notices, and all other purposes for which such information is desired. What has long been needed is an accurate compilation of data, made up of information obtained from official sources, such information then to be carefully edited and classified and kept corrected up to date, for the use and information of licensing bodies, and for any responsible person desiring information for legitimate purposes.

While the necessity for such classified information has been long recognized, until recently, conditions have not been favorable for its establishment and maintenance. Now with organization more or less completed, such is possible. In his annual report at the Portland session, the General Secretary of the American Medical Association said:

> It has long been recognized that a permanent biographical card index of American physicians, giving data in regard to preliminary education, medical education, previous locations, etc., would be of great value to the Association and to the profession. Such an index would be of value in tracing a physician through various localities, making up matter for directories and in compiling statistics in regard to the profession. This work has been begun and is now being carried on along two different lines, namely, first, the accumulation and indexing of biographical data in regard to the members of the profession now engaged in active practice; second, the accumulation of similar data in regard to graduates of the current year and of recent licentiates of state boards of health. This has been carried on through the assistance and co-operation of medical colleges and secretaries of state licensing boards. The amount of information on hand is considerable and is steadily increasing.

This was approved by the Committee on Reports of Officers and adopted by the House of Delegates, with instructions to the General Secretary to continue the work of collecting and classifying biographical information.

In accordance with this action, a biographical card index of the medical profession has been established, and it is hoped that very soon this index will contain a card for every physician in the United States. On the card will be recorded name, place and date of birth, preliminary education, medical college and year of graduation, state license and date, medical societies, college and life insurance positions, school of practice, and specialty, if any. In connection with this fundamental information, provisions are made for recording removals, positions held and other matters that may occur in the life of the individual that are of sufficient medical interest to note. Such information is pouring into the general offices of the Association from state and county societies, from licensing bodies, from newspaper clippings, the latter alone averaging over one hundred and fifty a day. Through the co-operation of medical colleges and state boards, certified lists of graduates and licentiates, together with most of the personal information requested, have been obtained and are now being properly classified. There is now in possession of the Association a fairly complete list of graduates of American medical colleges from 1860 to 1901. This list has been supplemented and brought up to date through the co-operation of registrars and secretaries of medical colleges. Copies of the official records of more than three-fourths of the licensing bodies have been secured. The remaining records are now being copied and will soon be completed. Blanks for reports both of colleges and of licensing boards have been prepared.

Each year a supplementary list of recently graduated and licensed physicians will be procured and added to the general index. There will thus be formed a list of all medical graduates, as well as of all legally qualified practitioners, made up from official records, and carefully corrected and revised each year. Information lacking regarding individuals will be constantly added. Thus it will be seen that the information asked for is primarily intended for this index. As a reliable and official list of legally qualified practitioners, it will be of great value and will undoubtedly aid in securing general reciprocity among licensing bodies.

The second reason for desiring this information is for use in compiling a reliable and accurate directory. The directory however, is only incidental to the other work. From the index will be drawn information, either personal or official, for compiling, revising and correcting the directory, both the one now in preparation, as well as subsequent editions.

The American Medical Directory will differ from directories heretofore issued in three particulars: First, it will be a directory of the American medical profession published and owned by physicians themselves. Second, information regarding college and year of graduation and date of licensure will be verified from official sources. Third, it will furnish the same information regarding each physician, whether he be a subscriber to the directory or not. No paid-for information will be included. It will also combine in one volume the purpose of a general medical directory, as well as a medical society blue book, since the names of all members in good standing of the constituent state associations and their component branches will appear in capital letters, as a distinctive mark of such membership. Information contained in the directory regarding each physician will include name in full, year of birth, college and year of graduation, office address and office hours.

The assistance and co-operation of all physicians, and especially all members of the organized profession, is earnestly requested in carrying on and developing this work. The greatest service that any physician can render at the present time is to furnish, promptly and accurately, information regarding himself. For the purpose of obtaining this information a blank has appeared in successive numbers of THE JOURNAL for the last six weeks. About 20,000 of these have been filled out and sent in.

A number of physicians have written saying: "You will find full information regarding me in the ———— Directory." As practically all directories are copyrighted works, it will be readily seen that such information is not available for the purposes desired. Other physicians have replied, saying, "You will find my complete record in the Transactions of the ———— Medical Society for the year ——." A moment's reflection will show the difficulty in tracing up the personal record in this way. The time required for a physician to fill out and return these blanks is infinitesimal; the time required for the directory office force to trace each individual is great. If each reader of THE JOURNAL will furnish at once, without further solicitation, the personal information regarding himself, the work of accumulating the data will be greatly simplified. On advertising page 32 of this issue will be found the information blank desired. All readers of THE JOURNAL who have not already done so, are urged to furnish this information at once.

THE VALUE OF SINGLE CLINICAL SYMPTOMS IN THE DIAGNOSIS OF TYPHOID FEVER.

In no common disease more than in typhoid fever does the diagnosis depend on the correlation of single symptoms, and no common disease is more often incorrectly diagnosed. If the Spanish War had shown nothing else of medical interest, the information it gave us regarding the difficulty of diagnosing this disease would have been of inestimable value. Those who looked over the admirable report of Reed, Shakespeare and Vaughan must have been struck with the fact that more mistakes in diagnosis were made in connection with typhoid than with any other common condition. In civil practice, too, a similar condition has prevailed and still prevails. Too many practitioners still fail to realize that a fever that does not yield with reasonable promptness to quinin is not malaria, and that in many districts the only contin-

ued fever is typhoid. It is but a few years since Osler, in an address before a New York audience, called attention to the frequency with which malaria was given as a cause of death in that state, and with gentle and good-natured sarcasm referred to typhoid fever as "New York malaria." On the other hand, in many cases typhoid is made the scapegoat, and any obscure condition is diagnosed as typhoid fever.

Superstition, though dormant or appearing in aberrant forms, still enters into the constituent parts of humanity. In medicine, as elsewhere, superstitions die hard, and the superstition of the pathognomonic sign dies hardest of all. Who has not met the practitioner who, in diagnosing a fever case, says: "No, this can not be a typhoid-fever case, for the patient has not a typhoid tongue." If it is not the tongue it is the pea-soup discharges or delirium or a typical fever. If we are to rely on single symptoms and signs, or on groups of prominent symptoms and signs, what are the important ones in this disease? Are the more modern methods, when available, of striking value? These questions have been considered and answered in a recent paper of Treupel.[1] This author's analysis of his carefully studied cases shows that some of the signs and symptoms supposed to be most characteristic appear in a remarkably small percentage of cases, and they also indicate the great value of certain of the more recent methods of diagnosis.

There are certain facts of essential importance which should always be considered in reaching a conclusion as to whether a given patient has or has not typhoid fever. The history of the prodromal symptoms, either general or referred to special organs, the temperature, the pulse, and especially its relation to the degree of fever, the involvement of the respiratory organs, the condition of the tongue and of the digestive tract in general, the presence or absence of an enlarged spleen, the skin eruption, the Widal reaction and the presence or absence of typhoid bacilli from the blood. The two last-mentioned signs are relatively new, and while the Widal reaction is now generally used, blood cultures have not yet come into general favor. Treupel's analysis deals with all of these factors, and gives the relative value of each in figures. The results are interesting. The typhoid tongue, for instance, was present in only 16 per cent. of his cases, and a typical temperature curve in less than 50 per cent. Pea-soup stools were the exception and constipation the rule. Bronchitis occurred in less than 50 per cent. of the cases. Far outclassing every other sign as regards frequency of occurrence were the two new diagnostic measures, the Widal reaction (90.6 per cent.), and the presence of typhoid bacilli in the blood (92.8 per cent.). Of the signs which are appreciable to the senses, and do not need the aid of laboratory methods to bring them out, the most important are the enlarged spleen, the relatively low pulse rate, the rose spots and abdominal tenderness or meteorism.

1. Muench. med. Wochft., 1905, vol. III, p. 1870.

One is tempted to ask whether the signs and symptoms of a given disease may not vary from generation to generation; whether we do not expect to find certain symptoms and signs because professional tradition has taught us to expect them. There is no doubt as to the clinical acuity of our professional forbears; so far as the unaided senses are concerned, in all likelihood they were much better observers than we are. There are good reasons on theoretical grounds why infectious diseases should become modified in the course of time, and not a little practical proof that this has actually occurred in some cases. In all probability it has taken place to some extent in typhoid fever, partly, no doubt, as the result of changes in treatment. Even the text-books suggest it. It is to be hoped that the fact will soon be more widely appreciated.

FEDERAL PROTECTION OF THE PUBLIC HEALTH.

One of the most important and most significant of the favorable results of the late epidemic of yellow fever has been the widespread agitation in the southern states, having as its object the creation of a public sentiment in favor of transferring to the Federal Government all matters of national and interstate quarantine. This is all the more notable because heretofore it has been chiefly the southern adhesion to a strict construction of the rights of the state that has prevented the development of a national department of health. In order to show the character of this change in sentiment, we reproduce in this issue[1] a few excerpts from southern press editorials, together with expressions from prominent state governors. Those interested in public health development will find these very significant.

Clearly, the present is the opportune time for asking Congress to create a department of health, to which shall be assigned certain duties in national and interstate quarantine, together with various incidental tasks, such as collecting general and accurate vital statistics. It would not seem to require any stretching of federal function to assign to this new department the sanitary policing of all the navigable waters of the nation, which, by the United States Constitution, are declared to be a part of the national domain, and are placed under the authority of Congress. By a persistent national application of this new function, it is reasonable to think that much improvement would be noted in the mortality from diseases whose infection is waterborne. To this new department would logically fall the execution of the provisions of the pure food and drug law, which will sooner or later be placed on the statute books. Other and important functions will suggest themselves, such as the problems of immigration, and of sanitation in Panama, Porto Rico, Alaska and the Philippines. In such a department all the medical activities of the government could be centralized and harmonized.

It is unfortunate that up to the present time no pro-

1. See page 1593.

posed law for the establishment of a national department of health has been satisfactory to all students of the subject. Certainly, however, this does not imply that a comprehensive and safe measure can not be drawn. Beyond doubt there never has been a time in the history of the country when the conditions were so favorable for the friendly and interested consideration of such a measure by Congress.

In addition to others mentioned as willing to permit enlargement of the functions of the General Government in the direction of public health duties, it must be borne in mind as highly significant that Governor Cox of Tennessee felt so much interest in the movement that he called a conference of governors, health officials and other citizens of the southern states at Chattanooga, November 9 to 11. At this conference Congressman John Sharp Williams, Democratic leader in the United States House of Representatives, was made chairman of the committee on quarantine, and this committee brought in a report recommending federal control of foreign and maritime quarantines and control of interstate quarantine by the individual states in cooperation with the Federal Government. This report having been adopted, the question is certainly before the country in active form.

THE POWER AND INFLUENCE OF THE PROPRIETARY ASSOCIATION OF AMERICA.

During the last two or three weeks the newspapers of the country have been publishing from paragraphs to columns of matter denouncing the "unjust attacks on a legitimate (?) business" and abusing *Collier's Weekly* for publishing "sensational articles which are calculated to mislead the public." We have never known before what a noble, self-sacrificing business that of the nostrum manufacturer is, nor have we realized how necessary to human life these nostrums are. Sophistry, half-truths and plausible arguments are so intermixed that, to the ordinary individual, it would seem that the nostrum business is not only legitimate and honorable, but absolutely necessary for the welfare of the race. Except in rare instances this matter has not appeared in the metropolitan and leading dailies, for evident reasons, but the smaller newspapers and those that are less independent seem to be the ones that are compelled to defend the "Great American Fraud." The country newspapers which use the "patent-insides" are relieved of any responsibility, for the "defense" is in that part of the paper which they buy already printed.

While these articles have appeared in the public press in all parts of the country practically simultaneously, there is such a sameness about the style, the arguments used are so similar, and in general character so uniform, that one at once concludes that they must have a common origin. This conclusion would be reached even if there were no other evidence; but the letter we reproduced last week in a comment on "A Newspaper Free from Nostrum Ads.," written by the chairman of the press committee of the Proprietary Association, clearly proves the source. By the way, the "communication" which was sent to the newspapers with the letter referred to was the one from Mr. Bok, which appeared in THE JOURNAL of the American Medical Association,[1] in which he urged physicians to take up the fight against patent medicines. The object of the press committee of the American Proprietary Association evidently was to convey the idea that physicians are instigating the propaganda against "patent" medicine, and the dear people are being told that this is a fact and that the doctors oppose "patent" medicines for selfish reasons. Incidentally, the medical profession, the American Medical Association and THE JOURNAL of the American Medical Association are sadly abused.

What is this organization that has such a power over the newspapers of the country that it can compel them to speak or to be silent? Does this power lie in its numerical strength, in its wealth, or in the social influence of its members? To enlighten our readers, and, indirectly, the public, we print in this issue[2] a complete list of the members of this Proprietary Association of America, taken from their own transactions recently issued.

A glance at this list will give one an idea of the enormous wealth represented, so enormous that it is no exaggeration to say that it is one of the most powerful organizations in the country, from a financial point of view, and that it is not hard to believe that its members pay to the press of the country at least forty million dollars annually, as stated by one of them. Those who are interested in the nostrum question—whether as it relates to the so-called "patent" medicines advertised directly to the public or to those which are exploited to physicians—will find it worth while to give this list a careful study. In the first place, it will be found that there are a few firms in the list which are engaged in an honorable and commendable business. There may be a dozen of these, all told.

Further, it may be noted that scattered through the list are names that are familiar to readers of the advertising pages of medical journals—another evidence of the inseparableness of "patents" and "proprietaries." Another very important fact would be evident if we had space to give the personnel of the firms; a large number of those who under one company are "patent medicine men," under another are, in a very dignified way, exploiting "proprietary" medicines to physicians.

These various firms have banded together, for what? To protect the interests of what Samuel Hopkins Adams calls "The Great American Fraud"; to protect the interests of a business that is both infamous and despicable; a business in which few men will, without blushing, acknowledge that they are engaged; a business that thrives on misrepresentation and fraud, that fattens on the gullibility and credulity of the ignorant, and that prospers by deceiving the sick and afflicted.

1. THE JOURNAL A. M. A., May 20, 1905, p. 1628.
2. See page 1589.

This language may seem harsh. We acknowledge that it is. But is it too harsh when all the facts are known regarding the business and the methods of at least a large majority of the firms which are listed as members of the Proprietary Association of America?

LIQUOZONE.

Collier's for the current week contains Samuel Hopkins Adams' contribution on that wonderful preparation, "Liquozone," a nostrum that has been more widely exploited, and with more extravagant claims, in the short time that it has been before the public, than any other patent medicine, so far as we are aware. The methods adopted by its promoters have been so effective that the backers and endorsers of the preparation evidently thought they had struck a gold mine, figuratively speaking. It is a pity that Mr. Adams did not "name names" when he was speaking of the promoters and stockholders who "are prominent socially and forward in civic activities," for then it would have struck at the root of the matter as far as this particular company is concerned. One of the directors, we have been informed, has recently been elected to a high office in one of the leading social clubs of Chicago, and another prominent figure in the company is a leader in a movement for bettering the political conditions in Chicago. We understand, however, that there is more to come in regard to liquozone than is to appear in *Collier's Weekly,* and the probability is that the whole concern will be so shown up that those connected with it will wish that they had never lent themselves or their "influence" to such a business.

THE RETIREMENT OF DR. BIDDLE.

The announcement is made in the last number of the *Journal of the Michigan State Medical Society,* of the resignation of Dr. A. P. Biddle, secretary of that society, and editor of the journal. Dr. Biddle resigns owing to increased demands of work along other lines. The Michigan State Medical Society has accepted the resignation to take effect January 1, and voices its regret at Dr. Biddle's resignation, as well as its appreciation for his faithful and energetic services. This sentiment will be echoed by all officers and members of the American Medical Association who have come in contact with Dr. Biddle during the years of his secretaryship. He has always performed the arduous duties of his position cheerfully, promptly and effectively during the time that he has occupied the secretary's office. He has seen the state medical society grow to its present proportions and the *Journal of the Michigan State Medical Society* develop into one of the best state journals in the country. It is to be hoped that Dr. Biddle's retirement from the secretaryship will not mean that he will cease to take an interest in medical organization or to work as earnestly as heretofore, for the good of his state association and of the American Medical Association.

Active Congestion of Lungs.—Aconite is especially indicated in inflammatory states of the respiratory organs—one-half to one drop every half-hour until an impression is made on the fever movement, then every hour or two.—Bartholow.

Medical News

CALIFORNIA.

Sanitarium Opened.—The Loma Linda Sanitarium, near Redlands, a well-equipped branch of the Battle Creek Sanitarium, was opened to the public October 1.

Hospital Opened.—The new hospital of the Santa Fe System, Los Angeles, a three-story building in mission style, erected at a cost of $80,000, was formally opened November 1.

October in the Hospitals.—During October, 1,747 patients were treated at the five emergency hospitals in San Francisco. In the previous month 1,643 cases were treated, while in October, 1904, there were but 1,300 patients.

Hospital Association Meeting.—At the annual meeting of the Santa Ana Hospital Association, Drs. Charles D. Ball, Frances M. Bruner, John L. Dryer, Howard S. Gordon, James R. Medlock, Willela Howe-Waffle and John Wehrly were elected directors, and the directors thereon organized by electing Dr. Dryer, president; Dr. Bruner, vice-president; Dr. Ball, secretary, and Dr. Gordon, treasurer.

Personal.—Dr. Eleanora S. Yelland, Los Gatos, is visiting in Connecticut.——Dr. Carl R. Krone, Oakland, has resigned as superintendent of the East Bay Sanatorium and will resume private practice.——Dr. Ellis Harbert, Stockton, has been appointed division surgeon for the Santa Fe System.——Dr. Harry McNulty, San Francisco, formerly surgeon of the steamship *Sonoma,* has entirely recovered from his recent serious operation.

Crusade Against Patent Medicines.—The Board of Health of Los Angeles is reported to have begun a crusade against patent medicines which contain either poisons or alcohol. An analysis of all the more prominent patent medicines is being made, and the report will be published. There is a California law which has never been enforced which requires sellers of proprietary medicines to label the preparation with the name of any poison it may contain. Failure so to label the bottles is made a misdemeanor and a severe penalty is provided. Dealers in nostrums will be given a reasonable time in which to comply with the requirements of the law in this respect, and failure to do so will be followed by criminal prosecution. It is said that the board of health has secured from the city attorney's office the announcement that there is ample authority under the law for this crusade.

IDAHO.

New Regimental Surgeon.—Governor Gooding has commissioned Lieutenant-Governor Burpee L. Steves, Weiser, as major surgeon of the Second Infantry, Idaho National Guard, vice Major Castle, resigned.

New Hospital Opened.—The new hospital at Idaho Soldiers' Home, Boise, erected at a cost of $10,000, was formally accepted and occupied November 2. The 7 patients in the old building were removed to their new quarters.

Personal.—Dr. Robert L. Nourse, Hailey, is about to move to Boise, but before doing so he will go to Europe to take postgraduate work in the treatment of the eye, ear, nose and throat.——Dr. and Mrs. G. C. Kilgour, Roosevelt, have gone to Chicago.

ILLINOIS.

Cornerstone Laid.—The cornerstone of the new St. Vincent's Hospital, Taylorville, was laid November 8 with impressive ceremony.

Silver Wedding.—Dr. and Mrs. J. Leaming Wiggins, East St. Louis, celebrated the twenty-fifth anniversary of their marriage October 22.

Hospital Changes.—Drs. J. C. and J. E. Weld, Milford, have been appointed to the staff of the Illinois Eastern Hospital for the Insane.

Hospital at Mattoon.—The trustees of the Memorial Methodist Hospital Association of Mattoon have recently purchased a 25-room residence and will so remodel it that it will accommodate about 20 patients.

Pure Food Crusade.—It is reported that the Illinois Consumers' League is to co-operate with the General Federation of Women's Clubs in the crusade for pure food. A committee has been appointed to call the attention of the women of the state to the adulteration of foodstuffs.

Hospital Staff Elected.—The medical staff of Blessing Hospital, Quincy, met October 30 and elected Dr. Kirk Shawgo physician-in-charge; Dr. William S. Knapheide, surgeon-in-

charge; Dr. John H. Rice, gynecologist-in-charge; Dr. Melinda C. K. Germann, obstetrician; Dr. Clarence A. Wells, anesthetist; Dr. Frederic M. Pendleton, oculist and aurist, and Dr. George E. Rosenthal, pathologist.

Southern Medical Association.—The Southern Illinois Medical Association met in Mount Vernon November 1 and 2 and elected the following officers: President, Dr. J. Leaming Wiggins, East St. Louis; vice-presidents, Drs. Charles C. Grizzell, De Soto, and James W. Hamilton, Mount Vernon; secretary, Dr. Edgar E. Fyke, Centralia; associate secretary, Dr. Charles W. Lillie, East St. Louis, and treasurer, Dr. Alexis T. Telford, Olney. The next meeting will be held in Shawneetown.

Chicago.

Personal.—Dr. Samuel J. Walker has been seriously ill from septic infection due to a postmortem wound.

Senn Club.—The Nicholas Senn Club has been incorporated in Chicago for scientific research by Drs. Byron Robinson, Orville W. Mackellar and Arthur McNeal.

Hospital Borrows Money.—The Sisters of the Holy Family of Nazareth have obtained a loan of $50,000 for ten years, secured on the site of the Hospital of St. Mary of Nazareth and subject to a prior incumbrance of $150,000.

Refuses to Stop Examinations.—Master in Chancery Mason on November 6 denied the motion for an injunction to restrain the civil service commission of Cook County from continuing the examination for positions on the staff of the County Hospital.

Diphtheria.—During the week ended November 11, 17 fewer cases of diphtheria were reported than during the previous week, and although there was an increase of more than 31 per cent. in the number of requests for bacterial examinations of suspected cases of the disease, there was a decrease of more than 27 per cent. in the positive findings.

Deaths of the Week.—The total deaths for the week ended November 11 were 469, 29 less than for the preceding week and 56 more than for the corresponding week of 1904. The respective annual death rates per 1,000 were 12.28, 13.04 and 11.17. The chief causes of death were: Pneumonia, 63; consumption, 49; nephritis, 45; heart diseases, 40; violence, including suicide, 35, and cancer and acute intestinal diseases, each 28.

Alkaloidal Clinic Burned Out.—The three-story brick building occupied in part by the *Alkaloidal Clinic*, at Ravenswood, with the presses and publishing equipment, was completely destroyed by fire November 2, at a loss of $200,000. The large wooden building, closely adjoining, containing the offices and stock of the Abbott Alkaloidal Company, was saved. Dr. Abbott and his associates have at once taken up plans for a new start, proposing to issue a clinical journal of a broader scope than formerly.

INDIANA.

Gift to Hospital.—James M. Laboyteaux, a farmer living near Muncie, has contributed $1,000 toward the erection of a county hospital and, if necessary, will duplicate the gift.

New Medical Building.—Ground has been broken for a new building for the medical department of Valparaiso University, to cost about $50,000. The first winter term opened November 14.

In Guardian's Charge.—Dr. John Williams, Bowling Green, 96 years of age, who has practiced medicine for nearly seventy years in the state, was placed under the charge of a guardian November 6.

Schools Reopened.—The city schools and public library of Columbia City, which have been closed on account of a diphtheria epidemic, will reopen November 6.——The Potomac schools, which have been closed for a week on account of scarlet fever, were reopened November 4.

Magazines Consolidated.—The *Central States Medical Magazine*, Anderson, and the *Medical and Surgical Monitor*, Indianapolis, have been merged as the *Central States Medical Monitor*, to be published in Indianapolis. Dr. Samuel E. Earp will be the editor, and Dr. Samuel C. Norris will edit the eye, ear, nose and throat department.

Personal.—Dr. M. Hassenmiller, West Baden, has gone to Europe. Dr. Chauncey W. Dowden, Bloomington, has taken his place as house physician at the West Baden Springs Hotel. ——Dr. Charles R. Dancer, house physician at the Indiana School for Feeble-minded Youth, Fort Wayne, has resigned, to take effect November 1. Dr. Budd Van Sweringen has taken charge of the work at the institution until a successor is appointed.——Dr. John W. McGowan, Oakland City, who has been seriously ill with septicemia, is now believed to be convalescing.——Dr. Peter J. Pothuisje, Remington, has gone to Colorado.——Dr. Charles T. Bronaugh, Crawfordsville, who has been visiting in California, has returned.——Dr. Brose S. Horne, Marion, has moved to the Indian Territory.

IOWA.

Semi-Centennial.—The Fremont County Medical Society held a meeting November 1, at which a banquet was given in honor of Dr. Thomas G. Stephens, Sidney, who has just entered on his fiftieth year of medical practice.

Northwestern Physicians Meet.—At a meeting of the Northwestern Iowa Medical Association in Carroll October 26, Dr. Patrick J. Barry, Auburn, was elected president; Dr. A. L. Brooks, Audubon, vice-president; Dr. Giles C. Moorehead, Ida Grove, secretary, and Dr. Daniel J. Townsend, Lohrville, treasurer. In the evening a banquet was tendered the members of the association and the invited guests by Dr. Arthur L. Wright.

Diphtheria.—A number of country schools in Polk County are closed on account of the prevalence of diphtheria.——The schools of Anken and Elm Grove have been closed in an endeavor to check the spread of diphtheria, which has been prevalent in these towns.——There are several cases of diphtheria in Cedar Rapids.——As many as 30 cases have been reported to the city physician of Des Moines in one day. ——Dubuque has diphtheria in almost epidemic form.

Personal.—The State Board of Health has elected Dr. Henry Albert director of the State Board of Health Bacteriologic Laboratory, Iowa City.——Dr. Robert D. Wilkins, Atlantic, was thrown violently against a seat on a train en route to Chicago October 16, breaking three ribs.——Dr. Alanson M. Pond, Webster City, has gone to Europe.——Dr. Nathaniel La K. Slamberg, Kimballton, has been appointed surgeon at the Pine Ridge Indian Agency, South Dakota.——Dr. Herbert M. Decker, Davenport, has been appointed assistant state bacteriologist.

In the Courts.—Mrs. Stiles, Atlantic, arrested for peddling medicines without license, plead guilty, paid the costs of the case, amounting to $14.05, and took out the regular $100 license.——Dr. Charles McKinnis, Ollie, charged with issuing prescriptions for liquor, has been placed under bonds of $1,000. ———Dr. James C. Smith, Woolstock, has been permanently enjoined from selling intoxicating liquor of any kind in violation of law in the town of Woolstock or in any other place within the eleventh judicial district. The costs and attorney's fees were taxed to the defendant.——"Dr." J. R. Baker, Odebolt, who plead guilty to using the mails to defraud by the sale of a medicine, has been sentenced to six months' imprisonment in the state penitentiary at Anamosa.——Dr. Palmer, Fort Dodge, has been adjudged an habitual user of drugs by Judge Richard and committed to the Cherokee State Hospital for two years.——In the malpractice suit brought against Dr. Pattison of Oelwein by Mrs. Ackerson, in which $10,000 damages were asked, the jury rendered a verdict of $100 for the plaintiff.

KENTUCKY.

Medicine Vendor Fined.—A patent medicine vendor was fined $50 at Georgetown for selling medicines without a state license.

Personal.—Drs. Palmer G. Keeney, Edward S. Wendt and Oscar A. Frickman have been elected district physicians for Newport.

Physician Stabbed.—Dr. Robert A. Irwine, Clay City, a well-known physician of Powell County, was stabbed several times by an ex-convict November 4 and is in a serious condition.

Diphtheria is prevalent in Hancock and the eastern part of Daviess County, and the schools at Panther Creek, Floral and several other places have been closed on account of the disease.

New Hospital Started.—Ground was broken November 5 for the foundation of the new Good Samaritan Hospital, Louisville, to be built by public subscription. Of the fund of $50,000 required to complete the building on the plans proposed, $26,500 is already in hand.

MISSISSIPPI.

Personal.—Dr. J. Hewlett, Meridian, quarantine inspector, has resigned.——Dr. William Neville has been appointed health officer of Macomb City.——Dr. Troy C. Sexton, Laurel, is reported to be critically ill.

Marine-Hospital Records Burn.—At a fire at Jackson October 2, the records of the United States Public Health and

Marine-Hospital Service, in custody of Passed Assistant Surgeon George B. Young, were totally destroyed. Surgeon Young suffered also a personal loss of $1,000.

Asks Large Appropriation.—The board of trustees of the Mississippi State Insane Hospital, Jackson, has decided to ask the legislature for an appropriation of $150,000 for the purpose of erecting new buildings and making necessary improvements. The hospital is now crowded to overflowing and the board desires to have a detached building erected for a hospital and for the treatment of tuberculous patients.

To Examine into Insane Hospital Management.—Governor Vardaman has appointed a commission to examine into the management of the state insane hospitals located at Jackson and Meridian, consisting of Drs. Vardaman S. McLellan, Canton; Donald P. Street, Vicksburg; Ernest Spiva, Sturgis; Jefferson D. Smythe, Greenville; James W. Gray, Jr, Clarksdale; C. H. Ramsey, Collins, and John W. Young, Grenada.

MISSOURI.

Personal.—Dr. August Rhodes, Carthage, is critically ill at his home in that city.

Smallpox Epidemic.—Birchtree and the adjacent portion of Shannon County are suffering severely from a smallpox epidemic. There are reported to be at least 10 cases, and 4 deaths have occurred.

Opposes Club Doctors.—The Jackson County Medical Society adopted a resolution calling on all physicians engaged by lodges, societies and commercial institutions under contract prices, to resign at once under penalty of suspension from the society.

Diphtheria.—During the month of October 47 cases of diphtheria were reported in Kansas City, 14 less than on the corresponding day of 1904.——The board of health has ordered the fumigation of the Horace Mann and Linwood schools, in which districts the disease has been most prevalent.

Patent Medicine Advertisements.—The secretary of the St. Louis Medical Society has written to the city attorney of St. Louis, calling attention to a violation of city ordinances in the advertising of patent medicines. Some advertisements were characterized as obscene. The latter stated that the legislative committee of the society had appointed a committee consisting of Drs. George Homan, John Young Brown and Henry J. Scherck, to co-operate with the city attorney in enforcing a strict observation of the ordinances regarding advertising.

NEW MEXICO.

Hospital Society Organized.—The citizens of Albuquerque, claiming that eastern and western physicians are in the habit of sending dying tuberculous patients to that city, have established an associated charity hospital for those at present in the city, and will engage in a determined effort to put a stop to the practice of sending the hopelessly ill to New Mexico in the future.

Sanatorium to Open.—The New Mexico Cottage Sanatorium, Silver City, is nearly completed and will be open for patients November 25. The institution will be under the personal management of Dr. Earl S. Bullock. It consists of two main buildings and fifteen separate cottages, each of which accommodates one patient. The institution will be devoted exclusively to the care and treatment of cases of laryngeal and pulmonary tuberculosis.

NEW YORK.

Hospital Sunday.—The annual contribution obtained from city churches for the benefit of Ellis Hospital, Schenectady, October 22, amounted to $1,962.41.

Columbia Alumni Organized.—On November 2 the Columbia Alumni Medical Association of Buffalo was organized, with Dr. Carlton R. Jewett, president; Dr. Arthur W. Hurd, vice-president, and Dr. Edwin L. Bebee, secretary and treasurer.

New Hospital Dedicated.—The new building erected and equipped by Mr. and Mrs. Frederick P. Proctor at Utica at a cost of about $360,000, was formally dedicated and consecrated October 18. The hospital will accommodate 175 patients.

Memorial Hospital Building.—Mrs. G. D. B. Bonbright and Mrs. Robert Bartlett, daughters of the late James C. Hart, will erect a large addition to the Rochester City Hospital as a memorial to their father. The building will cost about $50,000 and will be three stories in height.

Medical Board Elected.—Dr. Joseph B. Hulett has been elected president; Dr. J. LaT. Hanmer, vice-president, and Dr. Edwin M. Schultz, secretary and treasurer, of the medical board of Thrall Hospital, at Middletown. The resignation of Dr. Edwin Fancher of the attending board was accepted and he was elected a member of the consulting board.

Northern New York Physicians.—The Medical Association of Northern New York met in Malone October 24 and elected the following officers: President, Dr. E. S. McClellan, Saranac Lake; vice-president, Dr. William C. Smith, Winthrop; secretary, Dr. Alfred G. Wilding, Malone, and treasurer, Dr. George H. Oliver, Malone. The association will meet in Malone next year.

Visitors to State Hospital.—The State Hospital, Buffalo, was visited October 23 by a royal commission of English visitors and philanthropists, who are making a tour of investigation of the institutions for the care and control of the feeble-minded in the United States. The commission was made up of W. B. Byrne, C.B., W. H. Dickinson, H. B. Donkin, F.R.C.P., J. D. Dunlop, F.R.C.P., and Mrs. Hume Pinsent.

Diphtheria.—Diphtheria is reported epidemic in Charlotte, and strict quarantine is being observed.——Public schools 59, 60, 64 and 65 of Brooklyn have been ordered closed pending official investigation of diphtheria which is prevalent in that section.——The public schools of Union Course have been ordered closed by the health department because the residents of that section would not allow the health inspectors to examine their children.

Central New York Physicians.—The Medical Association of Central New York held its thirty-eighth annual meeting in Buffalo October 24. Among the papers read was one on bony atrophy by Dr. Louis A. Weigel, Rochester, who as the result of his researches into the employment of *x*-rays, recently lost his right arm and three fingers of his left hand. The following officers were elected: President, Dr. David M. Totman, Syracuse; vice-presidents, Drs. William B. Jones, Rochester, and Lemuel L. Tozier, Batavia; secretary, Dr. Clarence A. Greenleaf, Rochester, and treasurer, Dr. William M. Brown, Rochester.

Personal.—Dr. Robert Frazer of the staff of the Riverside Accident Hospital, Buffalo, was operated on October 17 for appendicitis, and is reported as improving.——Dr. Max C. Breuer and family, Buffalo, returned from Europe October 21.——Dr. Fred M. Barney, Dolgeville, has received a government appointment in Cuba.——Dr. James E. O'Malley, Newburgh, who has been confined to his home for some time as the result of a broken patella, has resumed practice.——Dr. George H. Torney, first assistant physician at the State Hospital, Utica, has gone to California for a visit.——Dr. Douglas A. White, superintendent of the Hospital of the Good Shepherd, Syracuse, has resigned, to take effect December 1.——Bert E. Nelson has been appointed bacteriologist of the board of health of Binghamton.——Dr. Warren B. Stone has been appointed bacteriologist of Schenectady, vice Dr. Norman B. Saunders, removed from the city.——Dr. Henry H. Davidson, Northport, formerly coroner of Suffolk County, fell October 24 while walking across his office and fractured his hip.

New York City.

Home for Consumptives.—Under the direction of the *Tribune* Sunshine Society, Dr. James S. Ennis is to establish a Home for Consumptives in Florida.

New York Surgical Society.—At the annual meeting of this society November 8 the following officers were elected: President, Dr. George Woolsey; vice-president, Dr. Joseph A. Blake, and secretary and treasurer, Dr. John A. Hartwell.

Personal.—Dr. William J. Robinson, editor of the *Medico-Pharmaceutical Critic and Guide*, has returned from Europe after an absence of nine months.——Drs. Murray M. Rarick and W. E. Lippold have been appointed house surgeons and Dr. E. J. Dorn, ambulance surgeon, at the Williamsburg Hospital.

Signed False Death Certificate.—Dr. George E. Morgan, who in July last gave a certificate of the death of Mamie Jeanette Thompson, certifying that she had died from tumor, pleaded guilty November 8 to having falsely signed a death certificate and was sentenced to ten days' imprisonment in the Tombs and to a fine of $200.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended November 4, 363 cases of tuberculosis, with 150 deaths; 279 cases of diphtheria, with 22 deaths; 169 cases of measles, with 5 deaths; 77 cases of typhoid fever, with 11 deaths; 79 cases of scarlet fever, with 6 deaths; 9 cases of cerebrospinal meningitis, with 15 deaths, and 132 cases of chickenpox.

Hospitals Benefit.—A bazaar given at the Waldorf-Astoria on November 8 netted $6,000 for the Hospital for Crippled

Children.——The late Miss Margarette A. Jones has left the Postgraduate, St. Luke's and the Presbyterian hospitals a bequest which will give to each institution more than $200,000, the income of which is to be devoted to the care of poor patients.——The late John Inglis has left the Presbyterian Hospital $1,000.——By the will of Rebecca M. St. John the Northern Dispensary of New York will receive $3,000.

Hospital News.—The new wing of St. Vincent's Hospital, Manhattan, was formally opened November 1. The new building is seven stories high and has accommodation for 100 patients. It is fireproof and is thoroughly equipped.——Certificate of incorporation has been filed with the secretary of state by St. Joseph's Hospital, Far Rockaway, for the maintenance of a general hospital.——Bensonhurst Sanatorium Company has been incorporated in Brooklyn, with a capital stock of $100,000, by Dr. Earl H. Mayne and others.——The new Washington Heights Hospital was formally dedicated October 15.

Home Cure of Consumption.—The College of Physicians and Surgeons, Columbia University, announces favorable results of a plan for the cure of tuberculosis which has been employed in an experimental way for the past two years. This plan consists in treating the patient at the clinic and his home. Advice is given both verbally and on printed slips, instructing him how to live a sanitary life, and medicine is furnished when necessary. Each patient is placed in the care of a visiting nurse, who reports to the physician the conditions found at the home. During the two years in which the plan has been in operation there have usually been about 100 cases under treatment at one time. During the past year 408 patients were treated and 2,746 visits were made by the nurse.

Hospitals Wasteful.—The report of the findings of the committee on hospital needs and hospital finances, which has been at work since March of this year, states that the private hospitals of New York are extravagant in the use of costly drugs and dressings and that they do not receive the support from charitable persons that their work deserves. This committee is composed of men of large hospital experience and responsibility, who suggest that there should be uniformity in keeping accounts and making reports of work done, as the public has a right to know that hospitals are run under the most economical basis consistent with efficiency in treatment. The committee also suggests that the hospitals co-operate and purchase coal "in cargo" and that by similar co-operation they might be able to compel the gas company to furnish gas at reduced rates; and also that a large saving would result from the joint purchase of material.

NORTH CAROLINA.

The Prevalence of Disease.—During September measles were reported in 8 counties, whooping cough in 18, scarlet fever in 14, diphtheria in 41, typhoid fever in 67, malarial fever in 39 and smallpox in 11.

September Deaths.—During September 214 deaths were reported in the state, equivalent to an annual death rate of 16.9 per 1,000. Diarrheal diseases are reported to have caused 39 deaths; consumption, 23; heart diseases, 15; typhoid fever, 13; brain diseases, 12, and malarial fever, 10.

Society Entertained.—The Buncombe County Medical Society, with a number of invited guests, including prominent members of the profession without the state, as well as distinguished members of the North Carolina profession, were the guests of Dr. James A. Burroughs at his home in Asheville, N. C., November 6.

College Opens.—The fourth annual opening of the medical department of the University of North Carolina took place at Raleigh September 15. The opening address was made by Dr. Hubert A. Royster, dean and professor of gynecology and abdominal surgery. The standard of preliminary education has been advanced. The senior class numbers 10. Dr. William DeB. MacNider has been transferred to the chair of anatomy in the department at Chapel Hill. He continues his instruction in physical diagnosis, however, in the work of the medical department. Dr. R. S. Stevens of Smithfield has been elected to the chair of clinical pathology; Dr. James W. McGee, Jr., Raleigh, advanced from lecturer to professor of pediatrics, and Dr. Robert S. McGeachy, Raleigh, made instructor in therapeutics and anesthetics. The first two years of preparatory work are done at the university proper in Chapel Hill.

NORTH DAKOTA.

Postgraduate School Incorporated.—The Sixth District Postgraduate Medical School of North Dakota has been incorporated at Bismarck.

Personal.—Dr. A. M. McDonald, Grand Forks, has been appointed coroner of Grand Forks County, vice Dr. Herbert W. Matthews, Emerado, resigned.

North Dakota Medical College Opens.—The Medical College of the University of North Dakota, Grand Forks, opened for the year September 26. The university laboratories, equipment and instruction have been so arranged that the B.A. degree of the institution will admit students to the junior year in the medical college.

OREGON.

Personal.—Dr. H. Volp, Pendleton, and family have moved to the East, where he will locate.

Accident.—Dr. Allan Welch Smith, Portland, formerly assistant quarantine physician of Baltimore, Md., recently met with a painful accident while hunting. His rifle was accidentally discharged, the ball passing through the palm of the hand.

New Building for Willamette University.—The new building for the medical department of Willamette University, Salem, is nearing completion and will be ready for occupancy about January 1. It will cost about $15,000, nearly all of which has been subscribed by the people of Salem.

PENNSYLVANIA.

Diphtheria Closes Schools.—Two township schools near McDonald, the Robbs Run school and the Allegheny school, have been closed on acount of diphtheria.

Personal.—Dr. J. Miller Hyson, Red Lion, landed at New York October 14 after a circumnavigation of the globe.——Dr. Frank P. McCarthy, Oil City, has taken a trip to Wyoming.——Dr. Frank B. Statler, Johnstown, who has been seriously ill with typoid fever, is improving.——Dr. Robert G. Barckley, Milford, is recovering from a serious illness.

Donation Day.—At the hospital day exercises in St. Luke's Hospital, South Bethlehem, $5,000 in cash was donated to the institution by Samuel Thomas of Hokendauqua.——At the donation day of Chester Hospital, October 19, great quantities of supplies were given to the institution and cash donations amounting to $839.30 were also made.

Hospital Endowed.—Mrs. Mary Packer Cummings, Mauch Chunk, has agreed to give to the Robert Packer Hospital, which was named for her late brother, Robert A. Packer, Sayre, the income from certain real estate which will amount to more than $3,000 a year, and has also agreed to deed to the hospital ground adjoining the institution when the extension of the institution demands it.

Hospital Staff.—The staff of the Good Samaritan Hospital, Lebanon, is now composed as follows: Chief of staff and consulting physician, Dr. William M. Guilford; attending physicians, Drs. William M. Guilford and Charles M. Strickler; attending surgeons, Drs. John Walter, John Beattie and Alfred S. Weiss; gynecologist and consulting surgeon, Dr. Samuel Weiss; radiologist, Dr. Alfred S. Weiss; eye, ear, nose and throat department, Drs. Frederick S. Kaufman and Warren F. Klein; dispensary physicians, Drs. J. W. Trabert and Harvey E. Maulfair.

Philadelphia.

Bazaar for Hospital.—The board of women visitors of the Hospital of the University of Pennsylvania will give a Christmas bazaar for the benefit of the hospital, in Horticultural Hall, on the afternoons and evenings of November 23-25.

Free Public Lectures.—The Ludwick Institute announces a course of free public lectures on "The Natural Sciences and Their Application."——A series of five lectures is to be delivered by Dr. Henry Skinner on entomology every Monday evening, beginning March 19.

Sanatorium Dedicated.—The dedication exercises of the Pennsylvania Sanatorium, a branch of the Battle Creek institution, were held October 31. Hon. Wilson H. Brown acted as chairman, and the dedicatory address was delivered by Dr. John H. Kellogg, Battle Creek, Mich.

Personal.—Dr. Nathan F. Mossell has been reinstated as medical director of the Frederick Douglas Hospital and Training School. The election of Dr. E. C. Howard as medical director was declared illegal on account of the failure to notify members of the board that an election was to be held.

Hospital Association Election.—The Hospital Association of Philadelphia, at its annual meeting October 27, elected officers for the ensuing year. The association now has a membership of 28. The advisability of providing for an exchange between hospitals as regards chronic patients was considered.

Money for Health Department.—The councils committee on public health and charities has recommended an appropriation of $650,496 for the year 1906. Of this amount $285,156 is required for the maintenance of the Philadelphia Hospital and $80,140 for expenses of the office of director of public health and charities.

Hospital Reports.—The additional reports of the hospitals for October show that 58 patients were under treatment in the Kensington Hospital for Women; that 67 operations were performed, and that 36 new patients and 137 old patients were treated in the dispensary.——The report of the Medico-Chirurgical Hospital shows that 7,492 patients were treated.

Reading Relief Report.—The statement for the month of September, 1905, of the Philadelphia & Reading Relief Association shows an expenditure of $23,009.40, out of which $12,300 was paid for deaths and $10,709.40 for disability. The number of deaths was 23, of which 12 were from accidental and 11 from natural causes; 1,109 new cases were reported.

Internes Will Get Their Deposits.—The fourteen physicians who occupied positions as internes at the Philadelphia Hospital in 1903 and who each paid a deposit of $100, will receive their deposits as soon as the estate of the late superintendent of the hospital can be audited by the court. The deposit is required from each interne as a guarantee against loss by breakage of apparatus.

Medical Inspection in October.—The report of the division of medical inspection of the Bureau of Health for the month of October shows that 6,020 inspections were made, excluding schools; 506 fumigations were ordered, and 11 cases were presented for special diagnosis. The inspectors made 5,351 visits in the schools and excluded 877 children from attendance; 84 cultures were collected; 81 injections of antitoxin were given and 1,120 vaccinations were performed.

Bequests.—By the will of Sue M. Remak the German and Episcopal hospitals receive $100 each.——By the will of Miss Marie E. Brasier St. Joseph's Hospital receives $5,000 for a free bed in memory of Charles A. Brazier, and $5,000 for a bed in memory of Elizabeth P. Brazier. She also bequeathes to the same institution certain real estate and moneys derived from other real estate. The will also devises $10,000 to St. Vincent's Home and Maternity Hospital; $3,000 to the Sisters of St. Francis for the maintenance and support of St. Mary's Hospital——The Mount Sinai Hospital is devised $100 in the will of the late George Finkelstein.

Health Report.—The deaths for the week aggregated 438. This is an increase of 44 over the number reported last week, and an increase of 15 over the number reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 6; whooping cough, 4; diphtheria, 9; tuberculosis, 57; cancer, 26; diabetes, 6; apoplexy, 14; heart disease, 41; acute respiratory disease, 42; enteritis, 19; Bright's disease, 46; suicide, 5; accidents, 25; marasmus, 9. There were 251 cases of contagious diseases reported, with 18 deaths, as compared with 178 cases and 17 deaths for the previous week, an increase of 73 cases of contagious disease for the week.

Vital Statistics.—The report of the division of vital statistics of the health bureau for October shows that 1,580 deaths, 2,800 births and 963 marriages were reported. The report of the division of milk inspection shows that 5,200 examinations were made aggregating 116,954 quarts, and that 508 quarts were condemned. There were made 937 microscopic and 5 chemical examinations. The report of the bacteriologic laboratory reveals that 775 diphtheria cultures were examined; 415 specimens of blood for typhoid fever; 950 specimens of milk were analyzed bacteriologically; 111 specimens of sputum were investigated, and 8 disinfection tests were performed. The report further shows that 2,513,700 units of antitoxin were distributed. The chemical laboratory reported 95 analyses.

UTAH.

State Building Condemned.—It is reported that one of the most costly of the buildings occupied by the State Mental Hospital, which was constructed only two years ago at a cost of $30,000, has been condemned as unsafe and likely to collapse at any time.

Health Officers Confer.—At the session of the Association of Health Authorities of Utah, held in Salt Lake City, the following officers were elected: Dr. John S. Gordon, Ogden, president; Dr. Fred W. Taylor, Provo, vice-president; Horace Smith, Salt Lake City, secretary, and Dr. David O. Miner, Nephi, treasurer.

WISCONSIN.

Smallpox in State Institution.—On account of 10 cases of smallpox discovered among the students of the State Institute for the Blind, Janesville, the institution has been placed under strict quarantine.

Diphtheria.—Washington Harbor schools and churches have been closed and strict quarantine is being maintained on account of an epidemic of diphtheria on Washington Island.——The public school of Eland has been closed on account of diphtheria.

Unlicensed Practitioner Arrested.—Arthur Budan, Milwaukee, was arrested October 3 on a warrant sworn out by the secretary of the State Board of Medical Examiners, charged with practicing medicine without a license. Budan was arrested on a similar charge about a year ago. He claimed to be a graduate of the Harvey Medical College of Chicago, which is not recognized by the state board.

Personal.—Dr. John Van R. Lyman, Eau Claire, has returned from Europe.——Dr. J. Fremont Corbett, Weyauwega, has gone to Southern California for his health.——Dr. H. H. Williams, Sparta, has moved to Colorado.——Dr. Otto B. Bock, Sheboygan, has been appointed assistant surgeon of the Wisconsin National Guard, with the rank of first lieutenant, and has been assigned to the Second Infantry.——Dr. Thomas Fitzgibbon, Milwaukee, returned from Europe October 28.——Dr. John W. Coon has been made superintendent of the Milwaukee County Hospital, vice Dr. Ernest C. Grosskopf.

Must Report Accidents.—The new law, which went into effect November 1, provides that:

> It shall be the duty of any physician to report any accident to any person whom he shall be called on to care for professionally when such person is thereby incapacitated for pursuing his usual vocation for a period of at least two weeks. The cause, nature, and results of such accident, the place where and the condition of the person at the time it occurred shall be fully described in the report of said physician. The returns of such accident shall be made by the physician and by the public officer, and the fees therefor and the penalties for non-compliance on the part of either the physician or the public officer, shall be the same as in cases of births and deaths.

GENERAL.

Plague in Hawaii.—Dr. Hobdy of the United States Public Health and Marine-Hospital Service reports 2 deaths from plague at Honolulu, October 30.

Malaria on the Isthmus.—It is reported that malaria is prevalent among the laborers on the canal and among the population of Colon and Cristobal. Among the greatest sufferers are the recently arrived laborers from Barbadoes and the West Indies.

The Medical News Absorbed.—It is announced that the A. R. Elliott Company has purchased the *Medical News* of New York City and will consolidate it with the *New York Medical Journal*, Jan. 1, 1906. It will be a regret to those who have appreciated the *Medical News* to have it disappear from the ranks of eastern journalism. It has been understood that since the removal of the *Medical News* to New York it has been gradually losing ground, a fact not at all due to any lack of able editorial supervision or good material furnished in its reading pages. The *Medical News* has stood for high-class journalism, and it is hoped that all its good features will be retained by the purchasers.

Medicolegal Papers Wanted for International Congress.—The committee in charge of the International Medical Congress, which will be held in Lisbon from April 19 to 26, 1906, has written asking for the contribution of papers on the following subjects and their medicolegal relations, and saying that as yet no titles of communications touching on any of these subjects have been received from this country:

The signs of virginity and defloration.
Han dmarks and finger prints.
The mechanism of death by hanging.
The value of bacteriologic examination of vulvo-vaginal discharges in the determination of venereal contagion.
The signs of death by drowning.
Ecchymoses.
Spontaneous and criminal abortions.
Blood stains.
The relations between the seat of cerebral contusions and the point of application of the agent which produced them.
Epilepsy.
When is the induction of abortion permissible?
The best legislation for the protection of the "medical secret."
The effects of the civil and penal law toward the newborn living infant.
Organization of medicolegal services.

Any who intend to take part in the discussions of this section, or to prepare papers on these or other subjects, should inform the secretary of the American committee, Dr. Ramon Guiteras, 75 West Fifty-fifth Street, New York.

Women Nurses for the Navy.—Surgeon-General Rixey advocates the employment of women nurses in the navy. The medical department of the army is provided with a corps of trained women nurses, and their adaptability to service conditions and efficiency in institutions under military control have been fully established. Their services, says Dr. Rixey, would be useful in the naval hospitals, insuring for the sick of the navy as careful nursing as is now given to the sick of the army. Women nurses would also be of value in teaching and training the men of the hospital corps, and, in the event of war, besides being utilized on hospital ships, they could, in large part, take the place of the men in the naval hospitals, thereby releasing the latter for service with the force afloat.

Health Report of the Philippines.—The report of the Board of Health of the Philippine Islands for July states that 644 children were born in Manila during the month, a birth rate of 34.49 per 1,000 inhabitants. Seven hundred and ninety-five deaths were reported; of these 747 were residents and the others transients. There were 140 deaths from convulsions of children under 5 years of age, and 107 from pulmonary tuberculosis. Diarrhea and enteritis caused 85 deaths of children under 2 years of age and 52 deaths of older individuals. There were 3 deaths from bubonic plague.

Epilepsy Association to Meet.—The fifth annual meeting of the National Association for the Study of Epilepsy, etc., will be held at the Academy of Medicine, 17 Forty-third Street, New York City, the afternoon and evening of November 29. All persons interested are invited. The program includes the following subjects and authors:

Reports on Progress in the Public Care of Epileptics in New Jersey, Dr. H. M. Weeks, Skillman; in Kansas, Dr. L. M. Perry, Parsons; in Texas, Dr. John O. Preston, Abilene; in Indiana, Hon. Ezra Mattingly, Washington; in Australia, Miss Alice Henry, England.

Organic Epilepsy, Drs. D. R. Brower, Chicago, and Morgan B. Hodskins, Palmer, Mass.

The Management of the Individual Epileptic, Dr. Edgar J. Spratling, Forsyth, Ga.

Value of Hydrotherapy in Epilepsy, Dr. Guy Hinsdale, Hot Springs, Va.

Can a Colony for Epileptics be Made Self-sustaining and, if so, How? Dr. Thos. C. FitzSimons, Wilkesbarre, Pa.

Blood Pressure Observations in Epilepsy, Dr. Edward A. Kennedy, Palmer, Mass.

Epileptic Automatism, Dr. Edward Cowles, Boston.

Traumatic Psychic Epilepsy, Dr. Pearce Bailey, New York City.

Hospital Care and Treatment of Epileptics. Dr. Arthur O. Morton, Palmer, Mass.

Cases will be reported by Dr. Everett Flood, Palmer, Mass. Secretary of the association and by Drs. Matthew Woods, Philadelphia; N. B. Ross, Sonyea, N. Y.; W. P. Spratling, Sonyea, N. Y., and W. G. Chase, Boston.

Yellow Fever News.—In all, New Orleans has had 3,400 cases of yellow fever, with 451 deaths, a mortality of 13.26 per cent. At the present time there are only four or five cases under treatment.——Vicksburg reports that its epidemic expenses were between $15,000 and $20,000.——At Pensacola conditions are greatly improved, less than 40 cases being under treatment. In all, Pensacola has had over 560 cases, with some 80 deaths, a death rate of 14.28 per cent.——Charleston, S. C., on October 30 abandoned its quarantine.——One of the most serious sequels of the epidemic in New Orleans is now to the fore. On November 5 it was announced that Dr. Joseph Holt, who for years was president of the Louisiana Board of Health, had issued a circular letter making very grave charges against Dr. E. Souchon, president of the Louisiana State Board of Health, and Dr. Quitman Kohnke, health officer of New Orleans. Their conduct of the early days of the epidemic is directly attacked and their motives are impugned. This scandal threatened to raise its head during the epidemic. Now it evidently must be thrashed out to a finish, until reputations are cleared of suspicion. It is very unfortunate and yet full investigation will for all parties be preferable to repetition of gossip and scandal.——Later and more reliable reports from Natchez indicate that the city did not have a non-intercourse system, but a rigid exclusion of people from infected points, others being admitted by certificate. Almost from the beginning the Adams County Medical Society appointed a committee of seven, which acted as an advisory board of health.——On November 10, though nearly all quarantines are down, the press published a queer story of the detention by the Texas authorities of Miss Dorothy Tennant and her entire "College Widow" Company. They are said to have been appearing in towns that have not been infected, and, according to the story, a strong protest is being made, especially at the prospect of the company living a week in quarters recently tenanted by negroes and Italians.——Havana, Cuba, on November 10 reported 2 cases of yellow fever, both of the patients being alleged to be recent arrivals from New York. Evidently a different explanation will come later.

FOREIGN.

The Chair of Obstetrics at Edinburgh.—The curators of Edinburgh University have appointed Sir Halliday Croom to succeed Professor Simpson as teacher of obstetrics in that institution.

Supposed Yellow Fever Scare in Cuba.—A case supposed to be yellow fever was reported from Guantanamo; the patient died and the autopsy showed gastric ulcer and chronic nephritis, but no lesions of yellow fever.

The Medical Mayor of Lyons Appointed Governor of Madagascar.—Dr. Augagneur has been mayor of Lyons for several years and has made a fine record for his administration. His innovations and the energy with which he conducts affairs have long won for him in Lyons the title of the "emperor." We learn that he has recently accepted the position of governor of Madagascar.

The Virchow Monument in Berlin.—The memorial to Virchow is to be erected on the Karlsplatz, and $16,000 are already in hand for the purpose. Nearly half this amount was raised by subscription, the municipality making up the balance. Prizes of $600, $400 and $200 have been appropriated for the most suitable design for the memorial, the artists being left unrestricted as to style and size.

Congress of Criminal Anthropology.—The sixth Italian Congress of Criminal Anthropology is to convene at Turin April 26, 1906. There will be an exhibition in connection with the congress, and the friends and admirers of Professor Lombroso are planning a public manifestation in his honor on the occasion. A committee has the matter in charge; the chairman is Professor Pagliani, president of the medical faculty of the University of Turin.

Ewald Festival Number of Berliner klin. Wochenschrift.—Prof. C. A. Ewald has been connected as editor with the *Berliner klinische Wochenschrift* for twenty-five years, sharing the editorial responsibility with Prof. C. Posner. On the occasion of his sixtieth birthday, October 30, a special festival number was issued dedicated to him. It contains over 132 pages, while the weekly issue is generally from 18 to 26 pages. Twenty-eight articles are contributed by friends or former pupils and thirteen more by workers in the hospital under his charge. The dedication refers to the beautiful German custom of celebrating in this way the decennial anniversaries of its scientific leaders. It is assumed that a scientist and instructor will be most pleased and proud to be presented with the evidences of serious work done by those who stand the closest to him, scientific communications from his pupils who have received the stamp of his own spirit. "Such a *Festschrift* or *Festnummer* reflects the personality and the worth of the one thus honored better than any other tribute that could be offered." Two at least of the articles in the *Festnummer* are from America.

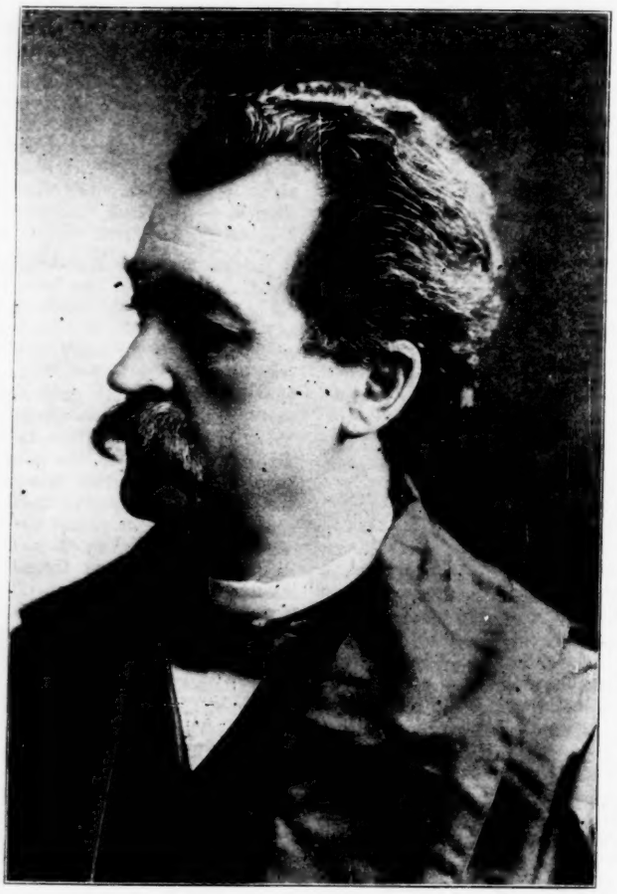
Italian Congress for Internal Medicine—Phenic Acid Treatment of Tetanus.—This congress (the fifteenth) was held at Genoa, October 24-29. The chief subjects were: "Etiology of Malaria," "Anemia of Parasitic Origin," and "Surgical Treatment of Gastrointestinal Affections." Great interest was aroused by the favorable statistics presented by Baccelli in regard to his method of treating tetanus by subcutaneous injections of phenic acid. Behring has reported a mortality of 44 per cent. with his serum, and Tizzoni 30 per cent. with his, but Baccelli's method has had a mortality of only 10 per cent. in 200 cases, while Woods has had only one death among 34 patients thus treated. Babes' research on dogs, rabbits and pigeons has confirmed the positive action of phenic acid on experimental tetanus. Baccelli proclaims that phenic acid is not only a powerful moderator of the reflexes, but also an excellent antithermic and good antitoxic. The perfect tolerance for it of the most seriously affected patients he regards as a proof that it is needed. "The tolerance for the remedy is directly proportional to the indication for it." He never gives more than 1 gm. or at most 1.5 gm. per day. Queirolo's experience has confirmed Baccelli's. He gives .5 gm. to .7 gm. a day and has never noted any inconveniences nor the slightest kidney disturbance. Ascoli stated that he had kept close watch of all the cases treated by Baccelli, and had become thoroughly convinced of the value of the treatment. As much as .5 gm. should be given without hesitation, pushing to .7 or .8 gm. if necessary, supervising the urine. He added that, when used in treating neuralgia and myalgia, doses up to 0.1 gm. a day should be currently injected. Its success in these affections was what impelled a trial in tetanus. All the speakers agreed that, except in the fulminating or extremely rapid cases of tetanus, the phenic-acid treatment gives results superior to those realized by any other technic to date.

THE SENN BANQUET

Testimonial Banquet and Presentation of Medallion and Loving Cup—A Splendid Tribute of Praise and Esteem from the Medical Profession

A testimonial banquet was given to Dr. Nicholas Senn, Chicago, at the Auditorium Hotel, Saturday evening, Nov. 11, 1905.

There was an attendance of 686, and from forty to fifty physicians, approximately, were turned away because proper accommodations could not be provided for them—a matter of great regret to the committee of arrangements. There were representatives present from twenty states. Dr. William A. Evans, Chicago, acted as toastmaster. Messages of congratulations were read from several prominent physicians in different parts of the United States, who regretted their inability to attend this notable event.



Dr. Joseph D. Bryant, New York City, presented a gold medallion to Dr. Senn, miniature replicas of which were distributed among those in attendance. On one side of the medallion was a likeness of Dr. Senn; on the other the inscription: "To Nicholas Senn, the Master Surgeon, from his Fellows, November 11, 1905." Dr. L. G. Nolte, Milwaukee, Wis., presented Dr. Senn with a silver loving cup, given by his former private pupils.

Between the speeches were interspersed musical selections by the Swiss Quartette and singing by the banqueters, Dr. Norval H. Pierce leading. Drs. Fernand Henrotin, Daniel R. Brower, Jacob Lang, and William E. Quine related very amusing and interesting anecdotes about Dr. Senn. Addresses were made by Drs. Witherspoon and McMurtry.

The occasion was a memorable one. Good fellowship prevailed, and Dr. Senn, the center of attraction, received a tremendous ovation.

This Banquet One of a Series.

Toastmaster Evans, after calling the meeting to order, said that, in a certain sense, this testimonial to Professor Senn is not the result of Chicago effort, but represents the spontaneous sentiment of the profession of the Mississippi Valley. Viewing the matter from that standpoint, he said there was no reason why a word of welcome should not be said to any man within the sound of his voice. But, on the other hand, there are many men who have journeyed to Chicago from afar in order to add their testimony, their presence, and their words to the testimonial that is given by those who live in the city of Chicago. In behalf of the central committee of arrangements, he extended a welcome to the visiting physicians from the Mississippi Valley, from the eastern seaboard, from the gulf states, and from the states of the Pacific. While Professor Senn is the beneficiary of this meeting, we are no less gainers by it. This is a series of banquets started some years ago, and there are hundreds present who remember how a similar banquet served to sustain the declining years of a man whom the profession all honored, and there are those who every day make acknowledgement of the fact that at that selfsame moment this section of the country was made a better land to live in and a better land in which to practice medicine. Dr. Evans referred to the banquets given to Christian Fenger and N. S. Davis, after which he introduced Dr. Joseph D. Bryant, New York City, who presented Dr. Senn with the gold medallion.

Presentation of the Medallion.

Dr. Bryant said that he knew of nothing that gives him greater comfort than to be able to fulfill the humble position that he was requested to do, the opportunity of spanning, by a few sincere, honest words of affection and praise, the brief interval between the bestowal of a token of distinguished regard and its acceptance by Dr. Senn, whom the profession so much delight to honor. It is fitting that one whose professional career began about the time of that of Dr. Senn should be chosen for this gracious purpose; one whose effort to emulate his achievements added much to the total of his own; one whose respect for him, begotten of years of friendly intercourse, has deposited in his heart a regard for him that knoweth no abatement.

Along the pathway of medical endeavor for nearly a quarter of a century noted and enduring examples illustrative of the wise forethought and generous co-operation are seen in the cause of advanced standing. Instances of his surgical technic foretell notable results that now proclaimed great surgical triumphs. The organization of military medicine, of no recent date, has yielded an abundant harvest because of his early conceptions and continued earnest culture. The books made by him, those given by him, will testify, respectively, to the bright sunshine of active life and the somber shadow of recollection. Human afflictions, which before his time yielded only to indomitable fate, now yield to the outcome of the inspiration of his teaching and the handiwork of his technic. Long-deferred and defeated hopes are now revealed in the happy opportunities contributed by the saving graces of reparative wisdom and skill of which he has given the lion's share.

Dr. Senn is classed a distinguished man, a distinguished surgeon—distinguished not only because of his surgical attainments, but because of the high standard of his ethical instincts and ennobling attributes of a generous nature. May I not, at this time, as a humble servant of joyous friends, present to him, in their behalf, this beautiful symbol of the love and respect which they cherish for him; the likeness of a sterling

man, embossed on pure gold, and bearing the legend of true distinction? (Here Dr. Bryant presented Dr. Senn with a gold medallion, the audience arose, waved handkerchiefs and cheered lustily.)

He expressed the hope that this token, emblematic of that which is noblest in human character, may serve to admonish doubting souls to strive for the highest and best of aims. (Applause.)

Loving Cup Presented.

The next speaker introduced was Dr. L. G. Nolte, Milwaukee, Wis., who presented a silver loving cup in behalf of Dr. Senn's former private students, and in so doing said: "As a token of love and affection, Dr. Senn, I present you with this cup (handing the cup to Dr. Senn), the emblem of love, and wish you a great many more years of usefulness, and trust that you may spend the afternoon of your life in good health." (Applause.)

At this juncture, at the suggestion of a South Dakota physician, who was unable to be present, the toastmaster requested the audience to rise and drink a toast to the late Christian Fenger, the teacher of Nicholas Senn, which was accordingly done.

Dr. Senn's Reply.

The toastmaster then introduced Dr. Senn, who was enthusiastically received. He rose amid the waving of handkerchiefs and hearty cheers, and when quiet was restored said, among other things: "I accept from your hands, Dr. Bryant, this beautiful medallion, and assure you that I would rather accept it from your hands than from the hands of any one I know of. I appreciate this tribute. I value it much more highly than I would a decoration by a royal hand." (Applause.) "That means the judgment of one man. This is an expression of love, respect and good wishes of the noblest of all professions." (Applause.) "There are two things in this world, Dr. Bryant, that have always an intrinsic value; one is labor, the other is gold. This medallion will be cherished and highly valued as a souvenir of this memorable gathering. It is to me an evidence that my labors, arduous as they may have been, have not been entirely in vain. I thank you, Dr. Bryant, for your presence and for your eloquent address. I wish also to thank Dr. Nolte as the spokesman of my old students, and wish to tell him that I may have been in the past a somewhat severe master; I may have seemed to my students unjust at times (cries of never, never). But let me say to you I have never asked a student to do what I would not do myself." (Applause.)

Dr. Senn then read a poem, the text of which, he said, was taken from one of the most famous of the ancient philosophers—Seneca. The title of the poem was "For Life is Short, and Art is Long."

In conclusion, Dr. Senn said: "Let me return my heartiest thanks, first, to the members of the committee of arrangements, and particularly to Dr. Evans. I thank all the gentlemen who have come from afar to bring me tributes from the profession. I thank the Swiss choir for their sweet songs, and I thank each one of you for your presence, for your friendship, for your respect, and for your good wishes." (Loud and prolonged applause.)

Mayo on "American Surgery."

The next speaker was Dr. William J. Mayo, Rochester, Minn., who spoke to the toast, "American Surgery." Dr. Mayo said that there is a surgery in this country that is so typical and characteristic that it can be said to be "American surgery." There was a time in which it did not exist. Twenty years ago the surgery of the United States of America was the surgery of the world, based on clinical observation and a most inadequate pathologic foundation. The early contributions to surgery in America did not come entirely from the seacoast cities, although great and noteworthy were they, but they came from this country as a whole. Bigelow, Mott, Morton and many others from the seacoast did most notable things; but we must recollect that Sims, Battey and McDowell came from the South; and we had, in Indianapolis, Bobbs, who did the first operation on the gall bladder, and Connors, who first removed the stomach in the Mississippi Valley. We had Wolcott, of Milwaukee, who operated first on the kidney; then we had Brainard and Gunn and Edmund Andrews, of Chicago. But twenty years ago we were behind in surgical pathology. Here and there men of European education had come to this country and established spheres of influence for scientific work. The work of Fenger, of Chicago; Lange, of New York, and others, while to a certain extent local in character, was of incalculable benefit to the people of the entire country. The mass of the profession of this country twenty years ago were behind the Germans in pathology. Germany in scientific surgery had passed us by. The mass of the profession in this country did not know the position they occupied until Senn's "Principles of Surgery" was published. (Applause.) This book was popular. It had its effect in diffusing knowledge and surgery in this country became instantaneous. This book did more to teach the profession how little they knew and how much that was being accomplished than any one thing that had happened. Following this were notable contributions to surgical pathology by Roswell Park, by John Collins Warren, of Boston, and others. At about this time there also appeared the great book of Gerster. It taught the profession how to apply the new knowledge which Senn, Fenger and others had brought forth. There appeared at this time, too, a series of letters from abroad, published in The Journal of the American Medical Association, and written by Senn, describing in clear-cut, forcible language the conditions as they actually existed in German clinics. These letters told the profession what they did, what they thought, and how they did it. Dr. Senn had written up the work of these men in such an absorbing and fascinating style that every man felt as though he himself had visited these clinics, and had seen these men work. These letters were a stimulus for every medical student, who desired to do surgery, to go to Germany or be drawn there as by a magnet. Every man who did surgery felt he could not do justice to his patients if he had not been abroad, and consequently he slaved and saved for the purpose. Multitudes of American students went to Germany, so that there were more medical students in Germany than in all the other foreign countries combined. American surgery was soon Germanized in the United States under the leadership of Dr. Senn. In ten years America was Germanized in surgical pathology. American students, who had attended German clinics, brought back what was best in each one and all of this was grafted on American surgery. In America, more than in any other place, there is now taught what may be called a living pathology. The scientific German accepts little that does not emanate from the deadhouse or does not come from the laboratory.

Another characteristic in this country which has been carried out more thoroughly than in any other place abroad is this: We see borderline cases in which the surgeon and physician must work in harmony. Joint investigations are necessary. Therefore, the laboratory, postmortem examinations, the physician, the surgeon, must enter into the making of scientific surgery.

At a time when American surgery was relatively held in contempt, Senn, by a series of brilliant articles on practical subjects, such as pancreatic disease, branchial cysts, etc., made the surgeons of the world respect America. It is fitting, therefore, that the profession should acknowledge their indebtedness to this man, whose work has been an inspiration to ambitious Americans, and to know that by hard work a reputation can be built up in the West that is durable, and for this and many things more the profession owes a lasting debt to Senn. (Applause.)

Tribute from the Army.

Col. Philip F. Harvey, U. S. A., the next speaker, said that Dr. Senn has not only made substantial surgical contributions to the medical service of the army, but has extended many favors and rendered many kindnesses to the members of his corps.

Tribute from American Medical Association.

Dr. Lewis S. McMurtry, Louisville, Ky., said that Dr. Senn does not belong to the profession of Chicago; he belongs to no section, to no locality, but to the profession of the entire country. Besides, he is an American. (Applause.)

In the great advances that have been made in medicine and surgery during the past twenty years, surpassing in their extent and progress all that has been known in medical science

in any century, the most potent influences in this great advancement have been the medical societies and medical press. They have played an important part in the stimulation of original research, in the development of individuality, and in the diffusion of knowledge. The local medical societies have grown both in size and number; they have become great post-graduate schools from which no pupil ever graduates.

There are medical societies which have varied functions. There are national associations for the development of special work, as the American Surgical Association, American Gynecological Society, etc. These societies are performing various important functions in the advancement of medical science in this country. They are limited in membership, and consist almost exclusively of authors, teachers and men who are known to be in the advanced rank as authorities in the various departments of medicine and surgery.

The American Medical Association has a function almost exclusively its own, almost unique, among the medical organizations in this country, namely, to reach the great body of the profession, to federate into one great organized body, through county, district and state societies, the organization of the profession which will be in accord with the spirit of the age, as seen in every department of human endeavor, and to diffuse knowledge among the members of the profession by the publication of a great weekly medical journal, and to bring the profession into close touch, so that great work can be accomplished. It has been the special purpose of this association to reach after the country doctors, the village practitioner, physicians in small towns, and bring them in close touch with one another. This association has, within the past few years, grown to be one of great power, and yet its work has scarcely begun. There are 130,000 physicians in the United States who need to be brought into the district and county societies and within the influence of this great national organization. In this work there have been leaders, among them the founder of the association—Dr. Nathan Smith Davis. Furthermore, through Dr. Senn's achievements, his influence has been felt in the association for years. His contributions to the Section on Surgery and Anatomy have been valuable. The association is the largest body of medical men in the world, and is destined to accomplish work along lines that will be more and more appreciated by the mass of the profession than any other medical society in existence. (Applause.)

The Medical Man Versus the Surgeon.

DR. JOHN A. WITHERSPOON, Nashville, Tenn., after captivating the audience by the stories he told in his droll way, said that if medical men had made diagnoses early enough surgeons would have saved thousands of patients they have lost. Since there is so much abdominal surgery being done, there is ample excuse for internists to make diagnoses as early as possible, because surgeons have so frightened the appendix that it curls up behind the cecum and internists can not find it. (Laughter.)

After brief reference to the late Spanish-American war, Dr. Witherspoon said that, should war threaten this country again, the boys of the fathers who wore the gray, and the boys of the fathers who wore the blue, will march side by side, and they will want no man as their surgeon more eagerly than Nicholas Senn. (Applause.) He is not only a great surgeon, but he has shown his patriotism. He is a good citizen. He is ever ready, on any and all occasions, to bare his face to the bayonet of any foe that may threaten this grand and glorious country. Therefore, the profession doubly owes him honor. (Applause.)

Dr. Senn as a Military Surgeon.

DR. CHARLES ADAMS, Chicago, representing the Association of Military Surgeons, said that this organization has now many hundreds of members with one heart, and this beats for its founder, Dr. Nicholas Senn. He recounted Dr. Senn's contributions to military surgery and the active part he has taken in the deliberations of that body.

Dr. Senn as a Traveler.

DR. DANIEL R. BROWER, Chicago, spoke of Dr. Senn as a traveling companion and of the trip he took with him around the world via Siberia. He referred to Dr. Senn's international reputation as a surgeon and to the manner in which he was royally and hospitably entertained by distinguished surgeons and physicians in the various cities they visited. Dr. Senn proved himself to be a very agreeable and delightful traveling companion, and their trip proved to be one triumphal march.

Dr. Senn in American Medical Literature.

DR. CHARLES A. L. REED, Cincinnati, said that Dr. Senn had contributed largely and liberally to the value and quality of the great mass of surgical literature. In the last twenty years his contributions to American medical literature amount to more than 250 entries, 238 of which relate to surgical subjects. In the list of titles are 12 printed volumes, some large, some small, but all of them important, many of them being used as text-books, others as standard works of reference in the majority of medical schools in the western hemisphere. Of these contributions a number have been translated into foreign languages. The range of subjects embraces practically every department of surgery. For the most part, these contributions are absolute protocols of original investigation. They cover, among other subjects, the surgery of the pancreas, stomach, the intestines, gall bladder, etc. Dr. Reed commended Dr. Senn's example in broad citizenship, a life actuated by an altruistic spirit of personal self-sacrifice, by a spirit of patriotism. (Applause.)

Dr. Senn as a Thorough Diagnostician.

DR. WILLIAM E. QUINE, Chicago, spoke of his association with Dr. Senn as an interne at the Cook County Hospital. He has seen Dr. Senn as an interne engaged in controversy with the members of the attending staff of that institution—men who represented the strongest elements of the profession—in relation to problems of diagnosis, and he has seen him floor every one of them, though boy he was. The intensity of his earnestness, the thoroughness of detail in his methods, impressed Dr. Quine and inspired him in his work. It was something of a liberal education to be under the inspiration and guidance of such a man. He investigated thoroughly every case from the very foundation to the most minute and most intricate of its ramifications. Dr. Quine said that he was sure that Dr. Senn will close his professional career as he began it and as he has lived it through every day of his life—with sincerity, with intelligence, with dignity of effort, and with an eye single to the best interests, the greatest happiness of his fellow-men, and the greatest advancement of his brethren in the medical profession. (Applause.)

The singing of "Auld Lang Syne" brought the proceedings to a close.

CANADA.

Less Typhoid in Montreal.—During the whole of 1904 there were 574 cases of typhoid fever in Montreal. The disease has not been near so prevalent during 1905. In the first ten months of the year there were 294 cases, whereas in the same time in 1904 there were 493.

Clergyman Arrested for Practicing Medicine.—The Rev. W. J. Arnold, a well-known Anglican clergyman of Margaret's Bay, Nova Scotia, has been prosecuted by the medical board of Nova Scotia for practicing medicine without a license. The prosecution was not successful, as the minister did not collect any fees.

More Applicants for License.—Twenty-five candidates presented themselves before the examining board of the College of Physicians and Surgeons of British Columbia at the annual examinations held a few weeks ago. Eighteen were successful. The number of applicants for license was greatly in excess of any former year.

Hospital Additions.—A deputation waited on the Ontario government last week, asking aid to provide additional accommodation for the Gravenhurst and Toronto Free Consumption Hospitals. The former has room for 25 patients, the latter for 100.——The new Alexandra Hospital, Montreal, for contagious diseases among Protestants, will be ready for patients in January.——The Western Hospital, Toronto, is erecting a new addition at a cost of $10,000.——A sanitarium for consumptives in Quebec province is shortly to be erected. A company has been organized and has received 500 acres of land from the Quebec government.——Niagara Falls, Ont., is to have a hospital at a cost of $17,000.

Pharmacology

Resolutions on Patent Medicines.

The Wabash County Medical Society at a recent meeting adopted the following resolutions, which were sent us by Dr. G. C. Kingsbury:

WHEREAS: The traffic in patent medicines is attended with serious consequences to the individual, often imperiling and destroying life, and,

WHEREAS: The science of medicine is, by the use of such nostrums prevented from extending its beneficent work, and,

WHEREAS: The many publications of our country devote so much space to the advertising of such harmful mixtures containing so large a percentage of alcohol, and,

WHEREAS: You have undertaken a fearless, energetic and practical exposure and attack on this enemy to life and science, we, therefore,

Resolve: That the science of medicine owes you our sincere appreciation for so truthful a presentation of the evils, deceptions, and the facts regarding this baneful industry to the public, and advertisers of these nostrums, and,

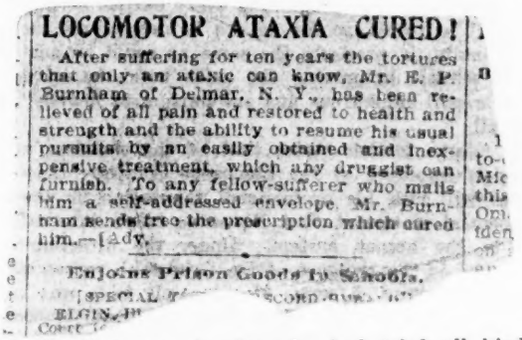
Resolve: That the medical journals should assist in destroying this traffic which is so inimical to the progress of medical science, and lives of the people, and

Resolve: That this society send these resolutions to THE JOURNAL of the American Medical Association, and the *Illinois State Medical Journal.*

BIOPLASM.

A Concrete Instance of the Manner in Which Remedies Supposed to be Ethical Are Exploited to the Laity.

The accompanying advertisement has been appearing in the newspapers for some time, and its resemblance to the old advertisement of the "Rev. Joseph T. Inman" of lost-manhood fame, aroused the curiosity of a member of THE JOURNAL force—or it may have been an innate desire to keep in touch with things. In any event, he, as a layman, answered the advertisement, and, in due time, an imitation typewritten letter was received. In it was rehearsed the old, old story of how the writer had for years



LOCOMOTOR ATAXIA CURED!

After suffering for ten years the tortures that only an ataxic can know, Mr. E. P. Burnham of Delmar, N. Y., has been relieved of all pain and restored to health and strength and the ability to resume his usual pursuits by an easily obtained and inexpensive treatment, which any druggist can furnish. To any fellow-sufferer who mails him a self-addressed envelope Mr. Burnham sends free the prescription which cured him.—[Adv.

Enjoins Prison Goods in Schools.

[SPECIAL TO THE RECORD-HERALD.]

ELGIN, Ill.

suffered the tortures, etc., how he had tried all kinds of physicians, all kinds of patent medicines, serums, various climates, etc., until he heard of the virtues of the medicines which finally cured him. Accompanying the circular letter was a sheet containing the prescription, with full directions. But it was not the "Rev. Joseph T. Inman" trick in all its apparent simplicity; it was Inman improved. Here is the first prescription: "Bioplasm (Bower) series No. 235a, No. 212, in sealed bottles; 2½ oz., containing about 175 tablets, costs $1.50." Then followed the directions. Farther down the sheet is the second preparation, which is: "Sal Lithin. Take a heaping teaspoonful," etc. Bioplasm! Sal Lithin!! Certainly we have seen these names before. "These prescriptions may be had of almost any druggist. If not, send to the manufacturers, Bioplasm Company, 100 William Street, New York."

Of course! We pick up certain medical journals and find that "Bioplasm" and "Sal Lithin" are "ethical proprietary" preparations, put up for physicians' use, for are they not advertised in medical journals? We wondered whether or not the Bioplasm Company was aware of the generous work that E. P. Burnham is doing, but this wonder only lasted ten days, for then came a letter from the company itself, with circulars, testimonials and other literature, all appealing directly to the credulous laymen, and especially to those suffering from that terrible affliction, locomotor ataxia. Of course, the literature said that bioplasm is endorsed by physicians, and, in fact, testimonials from medical men were among the literature sent to this layman by the company.

We shall have something more to say about this wonderful cure-all, bioplasm, in the immediate future.

The Great American Fraud, Liquozone.

SAMUEL HOPKINS ADAMS.

Twenty years ago the microbe was making a great stir in the land. The public mind, ever prone to exaggerate the importance and extent of any new scientific discovery, ascribed all known diseases to microbes. The infinitesimal creature with the mysterious and unpleasant attributes became the leading topic of the time. Shrewdly appreciating this golden opportunity, a quack genius named Radam invented a drug to slay the new enemy of mankind, and gave it his name. "Radam's Microbe Killer" filled the public prints with blazonry of its lethal virtues. As it consisted of a mixture of muriatic and sulphuric acids with red wine, any microbe which took it was like to fare hard; but the ingenious Mr. Radam's method of administering it to its intended prey, via the human stomach, failed to commend itself to science, though enormously successful in a financial sense through flamboyant advertising. . . .

In time some predaceous bacillus, having eluded the "killer," carried off its inventor. His nostrum soon languished. To-day it is little heard of, but from the ashes of its glories has risen a mightier successor, "Liquozone." Where twenty years ago the microbe reveled in publicity, to-day we talk of germs and bacteria; consequently Liquozone exploits itself as a germicide and bactericide. It dispenses with the red wine of the Radam concoction, and relies on a weak solution of sulphuric and sulphurous acids, with an occasional trace of hydrochloric or hydrobromic acid. . . . Yet the Liquozone Company is not a patent medicine concern. We have their own word for it.

"We wish to state at the start that we are not patent medicine men, and their methods will not be employed by us. . . . Liquozone is too important a product for quackery."

The head and center of this non-patent-medicine cure-all is Douglas Smith. Mr. Smith is by profession a promoter. He is credited with a keen vision for profits. Several years ago he ran on a worthy ex-piano dealer, a Canadian by the name of Powley (we shall meet him again, trailing clouds of glory in a splendid metamorphosis), who was selling with some success a mixture known as "Powley's Liquefied Ozone." This was guaranteed to kill any disease germ known to science. Mr. Smith examined into the possibilities of the product, bought out Powley, moved the business to Chicago, and organized it as the Liquid Ozone Company. Liquid air was then much in the public prints. Mr. Smith, with the intuition of genius, and something more than genius' contempt for limitations, proceeded to catch the public eye with this frank assertion: "Liquozone is liquid oxygen—that is all."

The object of the company was not to make money, but to succor the sick and suffering. They say so themselves in their advertising. For some reason, however, the business did not prosper as its new owner had expected. A wider appeal to the sick and suffering was needed. Claude C. Hopkins, formerly advertising manager for Dr. Shoop's Restorative (also a cure-all) and perhaps the ablest exponent of his specialty in the country, was brought into the concern, and a record-breaking campaign was planned. This cost no little money, but the event proved it a good investment. President Smith's next move showed him to be the master of a silver tongue, for he persuaded the members of a very prominent law firm who were acting as the company's attorneys to take stock in the concern, and two of them to become directors. These gentlemen represent, in Chicago, something more than the high professional standing of their firm; they are prominent socially and forward in civic activities; in short, just the sort of people needed by President Smith to bulwark his dubious enterprise with assured respectability.

In the Equitable scandal there has been plenty of evidence to show that directors often lend their names to enterprises of which they know practically nothing. This seems to have been the case with the lawyers. One point they brought up: was liquozone harmful? Positively not, Douglas Smith assured them. On the contrary, it was the greatest boon to the sick in the world's history, and he produced an impressive bulk of

testimonials. This apparently satisfied them; they did not investigate the testimonials, but accepted them at their face value. They did not look into the advertising methods of the company; as nearly as I can find out, they never saw an advertisement of liquozone in the papers until long afterward. They just became stockholders and directors, that is all. They did as hundreds of other upright and well-meaning men had done, in lending themselves to a business of which they knew practically nothing.

While the lawyers continued to practice law, Messrs. Smith and Hopkins were running the Liquozone Company. An enormous advertising campaign was begun. Pamphlets were issued containing testimonials and claiming the soundest of professional backing. Indeed, this matter of expert testimony, chemical, medical, and bacteriologic, is a specialty of liquozone. To-day, despite its reforms, it is supported by an ingenious system of pseudo-scientific charlatanry. In justice to Mr. Hopkins, it is but fair to say that he is not responsible for the basic fraud; that the general scheme was devised, and most of the bogus or distorted medical letters arranged, before his advent. But when I came to investigate the product a few months ago, I found that the principal defense against attacks consisted of scientific statements which would not bear analysis, and medical letters not worth the paper they were written on. In the first place, the liquozone people have letters from chemists asseverating that the compound is chemically scientific. . .

[Mr. Adams goes on to say that, on investigation, he found that the technical indorsement obtained by this company, when analyzed, failed to bear out the claims of liquozone as a medicine. Inquiries conducted along medical lines revealed the fact that the published indorsements were either misstatements or a garbled version of what really had been written about liquozone. One physician, a hospital interne, who was paid to make bacteriologic tests of the germicidal power of liquozone, stated that it had shown such powers, but that the product was worthless medicinally. The last half of his report was suppressed; only the first half was printed under the designation of "Report made by the ———— Hospital." Another statement was said to have been published by a Dr. "W. H. Myers" in "The New York Journal of Health." Dr. Myers and that journal, Mr. Adams says, are purely fictitious. Another testimonial purporting to come from a physician was found to have been written by a veterinary surgeon. The Suffolk Hospital and Dispensary in Boston, through its president, Mr. Smith, testified in glowing terms to the remedial value of liquozone, but the hospital medical authorities know nothing of liquozone and never prescribed it. One testimonial was found to be genuine, having been written by a "cancer-cure" specialist, who stated that the letter was "not solicitated." Letters addressed by Mr. Adams to various institutions in Chicago elicited the information that it either had never been used or that it had been experimented with for external application or that a few private patients had purchased it, but on no recommendation from the physicians. Attempts made personally to peruse the "overwhelming number of medical indorsements" failed, the officials of the company claiming that these indorsements were "in the press" and could not be shown.]

. . . In a pamphlet issued by the company and since withdrawn occurs this sprightly sketch:

"Liquozone is the discovery of Professor Pauli, the great German chemist, who worked for twenty years to learn how to liquefy oxygen. When Pauli first mentioned his purpose men laughed at him. The idea of liquefying a gas—of circulating liquid oxygen in the blood—seemed impossible. But Pauli was one of those men who set their whole hearts on a problem and followed it out either to success or the grave. So Pauli followed out this problem, though it took twenty years. He clung to it through discouragements which would have led any lesser man to abandon it. He worked on it despite poverty and ridicule," etc.

Alas for romance! The scathing blight of the legal mind descended on this touching story. The lawyer-directors would have none of "Professor Pauli, the great German chemist," and liquozone destroyed him, as it had created him. Not totally destroyed, however, for from those rainbow wrappings, now dissipated, emerges the humble but genuine figure of our old acquaintance, Mr. Powley, the ex-piano man of Toronto. He is the prototype of the Teutonic savant. So much the liquozone people now admit, with the defence that the change of Powley to Pauli was, at most, a harmless flight of fancy, "so long as we were not attempting to use a name famous in medicine or bacteriology in order to add prestige to the product." A plea which commends itself by its ingeniousness at least. . . . Just as to peruna all ills are catarrh, so to liquozone every disease is a germ disease. Every statement in the new prospectus of cure "has been submitted to competent authorities, and is exactly true and correct," declares the recently issued pamphlet, "Liquozone, the Tonic Germicide"; and the pamphlet goes on to ascribe, among other ills, asthma, gout, neuralgia, dyspepsia, goiter, and "most forms of kidney, liver, and heart troubles" to germs. I don't know just which of the eminent authorities who have been working for the Liquozone Company fathers this remarkable and epoch-making discovery. It might be Professor Pauli, or perhaps the sulphuric-acid-proof firm of Dickman & Mackenzie. Whoever it is ought to make the definite facts public, in the interests of humanity as well as their own. Monuments of discarded pill boxes will celebrate the liquozone savant who has determined that dyspepsia is a germ trouble. The discovery that gout is caused by the bite of a bacillus and not by uric acid is almost as important an addition to the sum of human knowlege as the determination of a definite organism that produces the twinges of neuralgia, while the germ of heart disease will be acclaimed with whoops of welcome from the entire medical profession. The old claim is repeated that nothing enters into the production of liquozone but gases, water, and a little harmless coloring matter, and that the process requires large apparatus and from eight to fourteen days' time. I have seen the apparatus, consisting of huge wooden vats, and can testify to their impressive size. And I have the assurance of several gentlemen whose word (except in print) I am willing to take, that fourteen days' time is employed in impregnating every output of liquid with the gas. The result, so far as can be determined chemically or medicinally, is precisely the same as could be achieved in fourteen seconds by mixing the acids with the water. The product is still sulphurous and sulphuric acid heavily diluted, that is all. . . .

[Mr. Adams further states that of the chemists and bacteriologists employed by the Liquozone Company there is not one who will risk his professional reputation on the simple and essential statement that liquozone taken internally kills germs in the human system. Under the direction of Mr. Adams, and in the presence of Dr. Gradwohl, representing the Liquozone Company, a series of guinea-pig tests was made by the Lederle Laboratories. The result was that liquozone was found to have absolutely no curative effect, but did, when given in pure form, lower the resistance of the animals which had been inoculated with anthrax, diphtheria and tuberculosis, so that they died a little earlier than those not treated. Dr. Gradwohl was satisfied of the fairness of the tests and declared that, in his opinion, the tests had proved the total ineffectiveness of liquozone as an internal germicide. Mr. Adams says that these experiments showed further that liquozone may decrease the chances of the patient's recovery with every dose that is swallowed, but certainly would not increase them. Mr. Adams continues as follows:]

Since the announcement of this article, and before, *Collier's* has been in receipt of much virtuous indignation from a manufacturer of remedies which, he claims, liquozone copies. Charles Marchand has been the most active enemy of the Douglas Smith product. He has attacked the makers in print, organized a society, and established a publication mainly devoted to their destruction, and circulated far and wide injurious literature (most of it true) about their product. Of the relative merits of "Hydrozone," "Glycozone" (Marchand's products), and "Liquozone," I know nothing; but I know that the Liquozone Company has never in its history put forth so shameful an advertisement as the one reproduced on this page [which appeared in THE JOURNAL, Sept. 23, 1905, p. 936], signed by Marchand, and printed in the New Orleans *States* when the yellow-fever scare was at its height.

And Hydrozone is an "ethical" remedy; its advertisements are to be found in reputable medical journals.—Excerpts from *Collier's Weekly*, Nov. 18, 1905.

MEMBERSHIP OF THE PROPRIETARY ASSOCIATION OF AMERICA

COPIED FROM THE TWENTY-THIRD ANNUAL REPORT

The following is a list of the members of the Proprietary Association of America, taken from the "Twenty-Third Annual Report" of that body:

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ARMSTRONG CORK CO., PITTSBURG, PA.
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Arnold's Cough-Killer.
Arnold's Anti-Bilious Pills.
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H. H. H. Medicine.
Mishler's Bitters.
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THE ATHLOPHOROS CO., NEW HAVEN, CONN.
Athlophoros.
Athlo-Tablets.
Athlo-Ointment.

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Ayer's Sarsaparilla.
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Ayer's Cherry Pectoral.

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Barker's Horse, Cattle and Poultry Powder.
Barker's Nerve and Bone Liniment.

BEGGS MANUFACTURING CO., CHICAGO.
Beggs' Blood Purifier.
Beggs' Cherry Cough Syrup.
Beggs' Diarrhœa Balsam.

THE R. T. BOOTH COMPANY, ITHACA, NEW YORK.
Hyomei Catarrh Cure.
Mi-o-na Dyspepsia Cure.

THE BRADFIELD REGULATOR CO., ATLANTA.
The Mother's Friend.
Bradfield's Female Regulator.

THE J. W. BRANT CO., LTD., ALBION, MICH.
Wheeler's Nerve Vitalizer.
Kirn's Kidney Tea.
Brant's Balsam.

L. M. BROCK & CO., LYNN, MASS.
Mrs. Dinsmore's Cough and Croup Balsam.
Mrs. Soule's Eradicator.

FREDERICK BROWN COMPANY, PHILADELPHIA.
Frederick Brown's Essence of Jamaica Ginger.
Mutter's Cough Syrup.

JOHN I. BROWN & SON, BOSTON.
Brown's Bronchial Troches.
Brown's Camphorated Saponaceous Dentifrice.
Brown's Vermifuge Comfets.

LYMAN BROWN, NEW YORK.
Seven Barks.
Globe Pills.
Peptic.

BROWN MANUFACTURING CO., GREENVILLE, TEN.
Ramon's Liver Pills and Tonic Pellets.
Ramon's Tonic Regulator.
Ramon's Nerve and Bone Oil.

H. E. BUCKLEN & CO., CHICAGO.
Dr. King's New Discovery.
Electric Bitters.
Bucklen's Arnica Salve.

JOSEPH BURNETT COMPANY, BOSTON.
Cocoaine.
Flavoring Extracts.
Kalliston.

DR. W. S. BURKHART, CINCINNATI.
Vegetable Compound.

ALBERT L. CALDER, PROVIDENCE, R. I.
Calder's Saponaceous Dentine.

THE CALENDULINE CO., CHICAGO.
Lowry's Calenduline Dressing.
Lowry's Eye Tonic.

CALIFORNIA FIG SYRUP CO.
Syrup of Figs.

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Wishart's Pine Tree Tar Cordial.
Wishart's Pine Tree Tar Plasters.
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Nutriotone.
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CARTER MEDICINE CO., NEW YORK.
Carter's Little Liver Pills.
Carter's Little Nerve Pills.
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CENTRAL VIAVI CO., KANSAS CITY, MO.
Distributors of the Viavi Preparations in Nebraska, Iowa, Kansas, and Missouri.

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Castoria.
Centaur Liniment.
Wei-de-Meyer's Catarrh Cure.

THE A. N. CHAMBERLAIN MEDICINE COMPANY, ELKHART, IND.
Immediate Relief.
Restorative Pills.
Cough Tablets.

CHAMBERLAIN MEDICINE CO., DES MOINES, IOWA.
Chamberlain's Cough Remedy.
Chamberlain's Colic, Cholera and Diarrhœa Remedy.
Chamberlain's Pain Balm.

DR. A. W. CHASE MEDICINE CO., BUFFALO.
Dr. Chase's Nerve Pills.
Dr. Chase's Kidney Liver Pills.
Dr. Chase's Ointment.

THE CHATTANOOGA MEDICINE CO., CHATTANOOGA.
McElree's Wine of Cardui.
Thedford's Black-Draught.
Black-Draught Stock Medicine.

CHENEY MEDICINE CO., TOLEDO.
Hall's Catarrh Cure.
Hall's Family Pills.

COCA COLA COMPANY, ATLANTA.
Coca Cola.

THE W. H. COMSTOCK CO., LTD., MORRISTOWN, N. Y.
Dr. Morse's Indian Root Pills.
Comstock's Dead Shot Worm Pellets.
Comstock's Nerve and Bone Liniment.

THE COOPER MEDICINE CO., DAYTON, OHIO.
Cooper's New Discovery.
Cooper's Quick Relief.
Dixie Lee Complexion Soap.

THE CHARLES N. CRITTENTON CO., NEW YORK.
Hale's Honey of Horehound and Tar.
Pike's Toothache Drops.
Hill's Hair and Whisker Dye.

DAVIS & LAWRENCE CO., NEW YORK.
Perry Davis' Pain Killer.
Allen's Lung Balsam.
Weaver's Syrup and Cerate.

THE DENVER CHEMICAL MFG. CO., NEW YORK.
Antiphlogistine.

DERM ASEPTIC COMPANY, CHICAGO.
Derm-Aseptic Skin Lotion.

E. C. DEWITT & CO., CHICAGO.
DeWitt's Little Early Risers.
Kodol Dyspepsia Cure.
DeWitt's Witch Hazel Salve.

DODD'S MEDICINE CO., BUFFALO.
Dodd's Kidney Pills.
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"New-Skin" Liquid Court Plaster.

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Sen-Sen.
Sen-Sen Chewing Gum.

EASTERN DRUG COMPANY, BOSTON.
Hayden's Viburnum Compound.
Stone's Cod Liver Oil.
Cutler's Pulmonary Balsam.

EASTERN VIAVI CO., CHICAGO, WASHINGTON, D. C.
Viavi.

THE EMERSON DRUG CO., BALTIMORE.
Emerson's Bromo-Seltzer.
Emerson's Rheumatic Cure.
Emerson's Phospho-Aperient.

THE EVANS CHEMICAL CO., CINCINNATI.
Big G.
Derma Royale.
Derma Royale Soap.

GEORGE B. EVANS, PHILADELPHIA.
Violet Talcum Powder.
Violetine Orris.
Mum (toilet deodorant).

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Fairchild's Essence of Pepsine.
Panopepton.
Peptogenic Milk Powder.

FASSETT & JOHNSON, LONDON, ENG.
Calista—for influenza, etc.

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Fellows Compound Syrup of the Hypophosphites.

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Foley's Honey and Tar.
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THE FOSO COMPANY, CINCINNATI.
Foso Bark Hair Grower.
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Guild's Green Mountain Asthma Cure.
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H. H. HAY'S SONS PORTLAND, ME.
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Hay's Hair Health.
Harfina Soap.
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Newbro's Herpicide.
Herpicide Soap.
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Hollister's Rocky Mountain Tea.
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Oriental Cream.
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Pastor Koenig's Nerve Tonic.
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Kohler's "Antidote" for Headache.
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Kondon's Catarrhal Jelly.
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Dr. David Kennedy's Salt Rheum Cream.
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Medical Discovery.
Rheumatic Dissolvent.
Salt Rheum Ointment.

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Kopp's Baby's Friend.
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KRESS & OWEN COMPANY, NEW YORK.
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Krause's Headache Capsules.
Krause's Cold Cure.
Krause's Liver Pills.

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Liquozone.
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Ponca Compound.

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Indian Weed.

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Munyon's Homeopathic Remedies.
Munyon's Paw-Paw.
Munyon's Witch Hazel Soap.

MURINE EYE REMEDY COMPANY CHICAGO.
Murine Eye Remedies.

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Dr. Miles' Nervine.
Dr. Miles' Heart Cure.
Dr. Miles' Anti-Pain Pills.

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Moxie Nerve Food.

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The Wonderful Japanese Oil.
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Newton's Heave, Cough, Distemper and Indigestion Cure.

HENRI NESTLE, NEW YORK.
Nestlé's Food.
Nestlé's Condensed Milk.
Nestlé's Swiss Condensed Milk.

THEO. NOEL CO., CHICAGO.
Vitae-Ore.
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G. G. NORRIS' SONS, CLEVELAND.
Porter's Cure of Pain.
Osborn's Golden Ointment.
Norris' Condition Powders.

NORTHWESTERN YEAST CO., CHICAGO.
Magic Yeast.
Yeast Foam.

NORWAY MEDICINE CO., NORWAY, ME.
Brown's Instant Relief for Pain.

NOYES BROTHERS & CUTLER, ST. PAUL.
Philopaidia.
Japanese Pile Cure.
St. Paul Chemical Oil.

OLNEY & McDAID, CLINTON, IOWA.
Prof. Dean's King Cactus Oil.
O. & M.'s Hive Syrup, Honey and Tolu.
O. & M.'s Green Mountain Salve.

OMEGA CHEMICAL CO., NEW YORK.
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Omega Oil Horse Liniment.
Omega Oil Soap.

C. H. & F. L. OSGOOD, TRUSTEES, NORWICH, CONN.
Osgood's India Cholagogue.

PABST BREWING COMPANY, MILWAUKEE.
Pabst Malt Extract, The "Best" Tonic

THE PACKER MANUFACTURING CO., NEW YORK.
Packer's All-Healing Tar Soap.
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PAPE MEDICINE CO., CINCINNATI.
Pape's Famous Prescription.
Pape's Kidney Cure.

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Laxative Bromo Quinin Tablets.
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Febriline.

PATTON-WORSHAM DRUG CO., DALLAS, TEXAS.
Oxidine.
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Patton's Sourwell Eye Salve.

PEACOCK CHEMICAL COMPANY, ST. LOUIS.
Peacock's Bromides.
Chionia.

PEPSIN SYRUP CO., MONTICELLO, ILL.
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THE PERUNA DRUG MFG. CO., COLUMBUS, OHIO.
Peruna.
Manalin.
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ARTHUR PETER & CO., LOUISVILLE.
Wintersmith's Chill Tonic.
Febri-Tone.
Vino Tonico de Wintersmith.

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Phenyo-Caffein.
Cas-Grada.

LYDIA E. PINKHAM MEDICINE CO., LYNN, MASS.
Lydia E. Pinkham's Vegetable Compound.
Lydia E. Pinkham's Blood Purifier.
Lydia E. Pinkham's Liver Pills.

THE PISO COMPANY, WARREN, PA.
Piso's Cure for Consumption.
Piso's Remedy for Catarrh.
Piso's Tablets.

H. PLANTEN & SON, NEW YORK.
Gelatin Capsules, Empty and Filled, of all kinds.
Airless Process Gelatin Capsules (a Specialty).
"Perloids" or Improved French Style Pearls.

PYRAMID DRUG CO., MARSHALL, MICH.
Pyramid Pile Cure.
Pyramid Pills.
Pyramid Ointment.

POND'S EXTRACT COMPANY, NEW YORK.
Pond's Extract.
Pond's Extract Toilet Articles and Specialties.
Pond's Extract Veterinary Remedies.

PRATT FOOD COMPANY, PHILADELPHIA.
Pratt's Food.
Pratt's Animal Regulator.
Pratt's Poultry Food.

THE PURDUE FREDERICK CO., NEW YORK.
Gray's Glycerin Tonic Compound.

MADAME A. RUPERT, NEW YORK.
Face Bleach, Soap and Toilet Articles.

RADWAY & CO. (INCORPORATED), NEW YORK.
Radway's Ready Relief.
Radway's Sarsaparillian Resolvent.
Radway's Regulating Pills.

D. RANSOM, SON & CO., BUFFALO.
Dr. A. Trask's Magnetic Ointment.
Dr. Ransom's Hive Syrup (Compound) and Tolu.
Dr. J. R. Miller's Universal Magnetic Balm.

RESINOL CHEMICAL CO., BALTIMORE.
Resinol Ointment.
Resinol Soap.
Elixir Cascanata.

THE RIPANS CHEMICAL COMPANY, NEW YORK.
Ripans Tabules.

RUMFORD CHEMICAL WORKS, PROVIDENCE, R. I.
Horsford's Acid Phosphate.
Rumford Baking Powder.
Horsford's Bread Preparation.

ANDREAS SAXLEHNER, NEW YORK.
Hunyadi Janos Water.

DR. J. H. SCHENCK & SON, PHILADELPHIA.
Schenck's Mandrake Pills.
Schenck's Seaweed Tonic.
Schenck's Pulmonic Syrup.

SCHIEFELIN & CO.,NEW YORK.
Bensolyptus.
Henry's Calcined Magnesia.
Moller's Cod Liver Oil.

SCHLOTTERBECK & FOSS CO., PORTLAND, ME.
Mixt. Helonin Comp.
Mixt. Hydrastis Comp.
Syr. Manganese Comp.

SCOTT & BOWNE, NEW YORK.
Scott's Emulsion of Cod Liver Oil.
Scott & Bowne's Buckthorn Cordial.

SEABURY & JOHNSON, NEW YORK.
Benson's Plasters.
Sanitary Cuspidores.
Ahl's Adaptable Felt Splints.

SECURITY STOCK FOOD CO., MINNEAPOLIS.
Security Stock Food.
Security Poultry Food.
Security Gall Cure.

W. F. SEVERA CO., CEDAR RAPIDS, IOWA.
Severa's Balsam for Lungs.
Severa's St. Gothard's Oil.
Severa's Stomach Bitters.

DR. SHOOP FAMILY MEDICINE CO., RACINE, WIS.
Dr. Shoop's Restorative.
Dr. Shoop's Rheumatic Cure.
Dr. Shoop's Cough Cure.

T. A. SLOCUM CO., NEW YORK.
Ozomulsion.
Psychine.
Coltsfoote Expectorant.

SMITH, KLINE & FRENCH CO., PHILADELPHIA.
Eskay's Albumenized Food.
Eskay's Neuro-Phosphates.

SOUTH BEND REMEDY CO., SOUTH BEND, IND.
Magnolia Blossom.
Royal Tea.

STERLING REMEDY COMPANY, KRAMER, IND.
Cascarets.
No-To-Bac.
Dr. Hobb's Sparagus Kidney Pills.

SWANSON'S RHEUMATIC CURE CO., CHICAGO.
Swanson's "5 Drop" Rheumatic Cure.
Swanson's "5 Drop" Inhaler Outfit.
Swanson's "5 Drop" Cough Balsam.

SULTAN DRUG CO., ST. LOUIS.
Cactina Pillets.
Seng.

THE E. E. SUTHERLAND MEDICINE CO. (INC.), PADUCAH, KY.
Dr. Bell's Pine-Tar-Honey.
Walker's Tonic.
Sutherland's Eagle Eye Salve.

F. A. STUART CO., MARSHALL, MICH.
Stuart's Dyspepsia Tablets.
Stuart's Absorbent Lozenges.
Stuart's Catarrh Tablets.

THE SWIFT SPECIFIC CO., ATLANTA.
S. S. S., Swift's Specific.

VALENTINE'S MEAT JUICE CO., RICHMOND, VA.
Valentine's Meat Juice.
Valentine's Meat Juice and Glycerin.

VAN STAN'S STRATENA CO., LTD., PHILADELPHIA.
Van Stan's Stratena Cement (Boxed).
Our National Cement (Card.).

VAN VLEET-MANSFIELD DRUG CO., MEMPHIS.
Plantation Chill Cure.
La Creole Hair Restorer.
Mansfield's Magic Arnica Liniment.

VAPO CRESOLENE CO., NEW YORK.
Vapo Cresolene.
Vapo-Cresolene Vaporizers.

THE VIAVI COMPANY, SAN FRANCISCO.
Viavi Pharmaceutical Preparations.

DR. C. WAKEFIELD & CO., BLOOMINGTON, ILL.
Wakefield's Blackberry Balsam.
Wakefield's Cough Syrup.
Wakefield's Golden Ointment.

H. K. WAMPOLE & CO., PHILADELPHIA.
Preparation of Extract of Cod Liver Oil.
Creo-Terpin Compound.
Formolid.

WARNER'S SAFE CURE COMPANY, ROCHESTER, N. Y.
Warner's Safe Kidney and Liver Cure.
Warner's Safe Diabetes Cure.
Warner's Safe Rheumatic Cure.

THE J. R. WATKINS MEDICAL COMPANY, WINONA, MINN.
Watkin's Vegetable Anodyne Liniment.
Watkin's Remedies, Extracts and Spices.

E. S. WELLS, JERSEY CITY, N. J.
The "Rough On."
The "Get There."
Wells' Preparations, etc.

WELLS & RICHARDSON CO., BURLINGTON, VT.
Paine's Celery Compound.
Diamond Dyes.
Improved Butter Color.

WHITALL TATUM COMPANY.
Glassware and Druggists' Sundries.

WORLD'S DISPENSARY MEDICAL ASSOCIATION.
Dr. Pierce's Favorite Prescription.
Dr. Pierce's Golden Medical Discovery.
Dr. Pierce's Pleasant Pellets.

WRIGHT'S INDIAN VEGETABLE PILL CO., INC., NEW YORK.
Wright's Indian Vegetable Pills.
Dr. Crossman's Specific Mixture.
Dr. McMunn's Elixir of Opium.

WILBUR F. YOUNG, SPRINGFIELD, MASS.
Absorbine.
Young's Kidney and Nerve Powders.
Young's Colic and Indigestion Cure.

J. H. ZEILIN & CO., INC., PHILADELPHIA.
Simmons' Liver Regulator.
Darby's Prophylactic Fluid.
Parrish's Glycerole of the Hypophosphites.

ASSOCIATE MEMBERS.

ALKALOL COMPANY, TAUNTON, MASS.
Alkalol.
Irrigol.

N. F. AMES & CO., CORRY, PA.
Hanson's Eureka Liniment.
Ames' A B C Salve.
Ames' Kidney Pills.

S. F. BAKER & CO., KEOKUK, IOWA.
Analgic Liniment.
Baker's Pain Relief.
Baker's Tonic Laxative.

BALDAUF DRUG CO., MILWAUKEE.
Baldauf's Healing Salve.
Baldauf's Blood and Nerve Tonic.
Kern's Insect Annihilator.

A. L. BECK, SHARON, PA.
Beck's Headache Powders.
Beck's Stomach and Liver Pills.

DR. BELDING MEDICINE CO., MINNEAPOLIS.
Dr. Belding's Skin Remedy.
Dr. Belding's Cough and Lung Remedy.
Dr. Belding's Wild Cherry Sarsaparilla.

BROWN CHEM. CO., NASHVILLE, TENN.
Dr. Brown's Magic Liniment.
Dr. Brown's Caul-Aleta.
Dr. Brown's Hepa-Cura.

BOERICKE & TAFEL, NEW YORK.
Physiological Tonicium.
Heusets' Tonicium.

BICKMORE GALL CURE CO., OLD TOWN, ME.
Bickmore's Gall Cure.

CAPITAL DRUG CO., AUGUSTA, ME.
Dr. Kinsman's Heart Tablets.
Dr. Kinsman's Complexion Wafers.
Dr. Kinsman's Asthma Remedy.

CAPUDINE CHEM. CO., RALEIGH.
Hick's Capudine.
Hick's Castoline.
Dr. Nagle's Cough Cure.

CAWTHON COLEMAN CO., SELMA, ALA.
Lenoir's Eczema Cure.
Henry's Magic Relief.
Henry's Antiseptic.

CRUTCHFIELD-TOLLESON CO., SPARTANSBURG, S. C.
Red Warrior Liniment.
Fe-No-Pep-Zone.
Taka-Tonic.

CYSTOGEN CHEM. CO., ST. LOUIS.
Cystogen.
Cystogen Aperient.
Cysto-Lithia.

DAGGETT & RAMSDELL, NEW YORK.
Daggett & Ramsdell's Perfect Cold Cream.
Headache Cologne.
Perfect Cold Cream Soap.

D. D. D. CO., CHICAGO, ILL.
D. D. D. Remedy.
Fruit Froth.
Dennisal Dermic Dissolvent.

W. P. DIGGS & CO., ST. LOUIS.
Dr. Classe's German Remedy.
Dr. Classe's Cough Syrup.
Gay-U-Ba.

B. A. FAHNESTOCK CO., PITTSBURG.
B. A. Fahnestock's Vermifuge.
Dr. Harris' Summer Cordial.
Dr. Harris' Cramp Cure.

FINLAY, DICKS & CO., LTD., NEW ORLEANS.
Chillifuge.
Mul-en ol.
Liver Ac.

S. B. GOFF'S SON & CO., CAMDEN, N. J.
Goff's Cough Syrup.
Goff's Herb Bitters.
Goff's Oil Liniment.

THE LESTER H. BREENE CO., MONTPELIER, VT.
Greene's Warranted Syrup of Tar.
Greene's Neu-Rol Pills.
Greene's Corn Cure.

THE HALLIER PROPRIETARY CO., BLAIR, NEB.
Barb Wire Liniment.
Pain Paralyzer.
Sarsaparilla and Burdock Comp.

HALLOCK-DENTON CO., NEWARK, N. J.
Clinton's Cough Syrup.
King Liniment.
Hart's Liver Pills.

HARRISON & ROTH CO., EVANSTON, WYO.
Harrison's Op. Antidote.

HENRY HEIL CHEM. CO., ST. LOUIS.
Borobenphene.
Glycobenphene.
Diamond Eczema Cure.

THE HERB MEDICINE CO., SPRINGFIELD, O.
Lightning Hot Drops.
Lightning Laxative Quinine Tablets.
Laxative Horse, Cattle and Poultry Powders.

HERMIT REMEDY CO., CHICAGO.
Hermit Salve.
Hermit Gastrene.
Hermit Purifica.

B. F. JACKSON & CO., INDIANAPOLIS.
Brazilian Balm.
Toxicola Tablets.
Renal Tea.

THE ANDREW JERGENS CO., CINCINNATI.
Woodbury's Facial Preparations.
Jergens' Pumice Soap.
Tonka-Talpa Soap.

KATHARMON CHEM. CO., ST. LOUIS.
Hagee's Cordial of Cod Liver Oil Compound.
Katharmon.
Antipuralgos.

L. W. LEITHHEAD DRUG CO., DULUTH.
Leithhead's Vet. Remedy.
Leithhead's Saker Kur.
Leithhead's Headache Cure.

THE DR. J. H. McLEAN MED. CO., ST. LOUIS.
Liver and Kidney Balm.
Strengthening Cordial.
Volcanic Oil Liniment.

MCNEIL MEDICINE CO., HARRISBURG.
McNeil's Pain Exterminator.
Keller's Catarrh Cure.
McNeil's Consumption Cure.

MORGAN & ALLEN, STEPHEN DEMBY, SUCCESSOR, NEW YORK.
Constitution Water.
Constitution Life Syrup.

P. NEUSTAEDTER & CO., NEW YORK.
Dr. S. Silsbee's External Pile Remedy, Anakesis.
St. Bernard Vegetable Pills (Krauter-Pellen).

ALLEN S. OLMSTED, LE ROY, N. Y.
Allen's Foot Ease.
Mother Gray's Austrian Leaf.
Mother Gray's Sweet Powder.

SOLON PALMER, NEW YORK.
Perfumes and Sachets.
Toilet Articles and Soap.
Palmer's Lotion and Soap.

THE PENN CHEMICAL DRUG CO., PITTSBURG.
Carboline.
Seven Seals.
Elixirine.

J. J. PIKE & CO., BOSTON, MASS.
Pike's Centennial Salt Rheum Salve.

R. PRETZINGER & BRO., DAYTON, O.
Pretzinger's Catarrh Balm.
Cough Bush.

F. AD. RICHTER & CO., NEW YORK.
Anchor Pain Expeller.
Anchor Congo Pills.
Anchor Sarsaparillian.

THE ROESSLER & HASSLACHER CHEM. CO., NEW YORK.

MARTIN RUDY, LANCASTER, PA.
Rudy's Pile Suppositories.
Dean's French Female Pills.
Dean's Vaginal Suppositories.

S. T. W. SANFORD & SONS, LONG ISLAND CITY.
Dr. Sanford's Liver Invigorator.

SHERROUSE MEDICINE CO., NEW ORLEANS.
Dr. Tichenor's Antiseptic Bron-cho-da.

J. T. SHUPTRINE, SAVANNAH.
Tetterine and Tetterine Soap.

THOMAS SISSON & CO., HARTFORD.
Griswold's Family Salve.
Hartford Smelling Salts.

THOMPSON BOTTLE COMPANY, GAS CITY, IND.
Bottles.

THE TONSILINE CO., CANTON, O.
Tonsiline.

DR. J. F. TRUE & CO., AUBURN, ME.
Dr. True's Elixir.
Dr. True's Worm Wafers.
Dr. True's Horse Worm Powder.

THE TURCK CO., BROOKLYN, N. Y.
Turck's Comp. Emulsion.
Dr. Cole's Catarrh Cure.

GEO. J. MALLAU, NEW YORK.
Crême Simon.
Ache Allay.
Carabana Water.

WALTER M. WILLET, SAN FRANCISCO.
Wakelee's Camelline.
Camelline Soap.

WINCHESTER & CO., NEW YORK.
Winchester's Family Pills.
Cough Cordial.
Pile Suppositories.

THE M. A. WINTER CO., WASHINGTON.
Nature's Health Restorer.

WYTTENBACH CHEM. CO., EVANSVILLE, IND.
Pruni-Heroin.
Yerba-Quinia.

ZOA-PHORA CO., KALAMAZOO, MICH.
Zoa-Phora.

Marriages

ELMER E. EVANS, M.D., to Miss Hazel V. Camp, both of East Oakland, Cal., October 24.

FRANCIS WELSH, M.D., Hospital, Ill., to Miss Lena Ackerman of Yorkville, Ill., recently.

THOMAS ELLIOT BUCK, M.D., to Miss Lulu T. Tillewein, both of St. Louis, November 1.

THOMAS D. PALMER, M.D., Canon City, Colo., to Mrs. Emma Baily Sherrill, November 8.

T. EDWARD BAILLY, M.D., to Miss Stella Fortmann, both of San Francisco, November 15.

THOMAS E. HOXSEY, M.D., to Miss Leila Posey, both of Spokane, Wash., November 7.

EDWARD BARR, M.D., Rome, Ky., to Miss Annie Ellis of Masonville, Ky., November 2.

CHARLES RENEAU ANDREWS, M.D., to Miss May Waldo, both of Atlanta, Ga., November 8.

JAMES HOUSE BUTE, M.D., to Miss Claire Robinson, both of Houston, Texas, November 8.

PAUL LANGE CORT, M.D., to Miss Mary Reeder Scudder, both of Trenton, N. J., November 16.

J. H. ALESHIRE, M.D., to Mrs. Addie Miller, both of Plainville, Ill., at Palmyra, October 31.

RUSSELL J. SHULL, M.D., Hugo, I. T., to Miss Virginia Claggett of Marlboro, Va., November 1.

HOMER THRALL JOY, M.D., to Miss Elizabeth Van Buren, both of New York City, November 9.

THOMAS P. WEST, M.D., Bedford City, Va., to Miss Sallie C. Ford of Lynchburg, Va., November 1.

LOAMIN J. SMITH, M.D., Ridge Springs, S. C., to Miss Lucile Provence of Tuskegee, Ala., October 31.

GEORGE WINSLOP LAWTON, M.D., to Miss Susie Schmieding of the City of Mexico, November 11.

THOMAS MEARES GREEN, M.D., to Miss Emma Perrin West, both of Wilmington, N. C., November 16.

CLARENCE MAXFIELD FRYE, M.D., Rock Falls, Ill., to Miss Birdie Ferris, of Sterling, Ill., November 7.

C. BERNARD VOIGT, M.D., Mattoon, Ill., to Miss Pearl Warner of Shelbyville, Ill., at Chicago, November 6.

HENRY WALTER GIBBONS, M.D., San Francisco, to Miss Hazel Noonan of Los Angeles, Cal., November 15.

BURNLEY LANKFORD, M.D., Norfolk, Va., to Miss Henrietta E. Grant, at Charlottesville, Va., November 8.

WILLIAM H. MORGAN, M.D., Keatchie, La., to Miss Lilliore C. Decker of Spottsylvania County, Va., November 8.

WALTER PHILIP EIDMANN, M.D., to Miss Cora E. Jackson both of St. Louis, Mo., at Belleville, Ill., November 8.

SAMUEL EVANS WATKINS, M.D., to Miss Mary Leontine Campbell, both of Washington, D. C., November 2.

SAMUEL PEACHY LATANÉ, M.D., to Miss Elizabeth Faulkner Shaw of Marco, Fla., at Valdosta, Ga., November 2.

WILLIAM K. NEWTON, M.D., Paterson, N. J., to Miss Cornelia Ridgely Hunt of Washington, D. C., November 15.

HERBERT LEE KNEISLEY, M.D., Westminster, Md., to Miss Daisy Sophia Bester, at Hagerstown, Md., November 9.

JOHN CHARLES MACGILL, M.D., Catonsville, Md., to Miss Annie Campbell Gordon Thomas, at Baltimore, November 8.

Deaths

George Benson Dunmire, M.D. Jefferson Medical College, Philadelphia, 1865, a member of the American Medical Association, the Medical Society of the State of Pennsylvania and once its treasurer, Philadelphia County Medical Society, Pathological Society of Philadelphia and Obstetrical Society of Philadelphia; hospital steward of the One Hundred and Twenty-fifth Pennsylvania Volunteer Infantry in the Civil War, died at his home in Philadelphia, October 31.

George W. Hudspeth, M.D. St. Louis Medical College, 1878, a prominent physician of Little Rock, Ark., a member of the American Medical Association, American Public Health Association, Arkansas Medical Society, and Pulaski County Medical Society; ex-member of the Arkansas State Board of Health, died at St. Joseph's Hospital, Memphis, Tenn., October 29, after a prolonged illness from septicemia following an operation on the kidney, aged 54.

Samuel E. Bibby, M.D. Howard University Medical Department, Washington, D. C., 1883, colonel and surgeon general of Idaho, a member of the American Medical Association and of the Association of Military Surgeons of the United States; for several years physician at the Lapwai Indian reservation; regimental surgeon in the Idaho National Guard through the Coeur d'Alene riots, died at his home in Grangeville, Idaho, November 3, aged 52.

Alexander Powe Hall, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1859, of Mobile, Ala., surgeon in the Confederate service throughout the Civil War, and one of the volunteer physicians who served through the yellow fever epidemic in Memphis, Tenn., in 1878, died at the Providence Infirmary, Mobile, October 22, from injuries received in a street car accident the day before, aged 69.

William Henry Borden, M.D. University of Buffalo Medical Department, 1849, a member of the American Medical Association, the oldest member of the Wisconsin Medical Society; surgeon of the First Wisconsin Volunteer Heavy Artillery in the Civil War; for many years a member of the board of visitors of the State University, died at his home in Milton, Wis., from senile debility, October 30, aged 81.

Cornelius N. Lyman, M.D. Transylvania University Medical Department, Lexington, Ky., 1843, a member of the American Medical Association; from 1883 to 1887 a member of the General Assembly of Ohio, and especially identified with the interests of the various benevolent institutions of the state, died at his home in Wadsworth, Ohio, October 24, aged 86.

Frederick **Templeton Zabriskie, M.D.** College of Physicians and Surgeons in the City of New York, 1895, formerly of Phoenix, Ariz., but for two years a practitioner of Pittsfield, Mass.; a member of the Berkshire District Medical Society, and a young surgeon of great promise, died at his father's home in New York City, from pneumonia, November 4, after an illness of two weeks, aged 34.

Elias **L. Bissell, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1861, surgeon of the Twenty-second and afterward of the Forty-fourth New York Volunteer Infantry in the Civil War, died at his home in Buffalo, N. Y., November 1, from heart disease, aged 72.

Alfred **N. Marion, M.D.** McGill University Medical Department, Montreal, 1864, surgeon in the army during the Civil War, agent at the Tulalip Indian Reservation, Wash., in 1887, and thereafter clerk of the United States Court in Walla Walla and a practitioner in Seattle, died suddenly at his home in Seattle, October 20, from nephritis, aged 65.

Hal **Walker Manson, M.D.** University of Nashville and Vanderbilt University medical departments, Nashville, Tenn., 1867, a Confederate veteran, in 1897 a member of the Texas legislature, died at his home in Rockwall, Texas, October 27, after an illness of several weeks, aged 64.

Helen **Frances Warner, M.D.** University of Michigan Department of Medicine and Surgery, Ann Arbor, 1872, a graduate of Vassar College in 1867, one of the pioneer women physicians of Detroit, died at her home in that city October 23, after an illness of six years, aged 62.

J. **B. Bouchard, M.D.** University of the Victoria College, Coburg, Ont., 1877, for twenty-five years physician to the east division of the Montreal police force, died at his home in that city November 6, from disease of the throat, after an illness of two years, aged 49.

George **W. Kemp, M.D.** Charity Hospital Medical College, Cleveland, Ohio, 1863, assistant surgeon of the One Hundred and Thirteenth Ohio Volunteer Infantry in the Civil War, died at his home in Marseilles, Ohio, October 24, after a long illness, aged 83.

Lafayette Charles Loomis, M.D. University of Georgetown Medical Department, Washington, D. C., 1863, of Winthrop Heights, Washington, D. C., one of the founders of Adelphian Academy, Brockton, Mass., died at Frederick, Md., October 17, aged 81.

Clarence **B. McClure, M.D.** Kentucky School of Medicine, Louisvile, 1871, formerly assistant physician at the Central Indiana Hospital for the Insane, Indianapolis, died at his home in Jeffersonville, Ind., October 28, from disease of the liver, aged 57.

Anthyme S. Menard, M.D. University of Vermont Medical Department, Burlington, 1888, whose injury October 19 by a runaway horse was noted in THE JOURNAL of October 28, died from his injuries October 20, at his home in Holyoke, Mass.

James Herbert Austin, M.D. Toronto University, 1893, formerly of Kansas City, Mo., and El Paso, Texas, died at his home in Toronto, November 5, from tuberculosis, after an illness of six years, aged 34.

Morris B. Gerberich, M.D. Pennsylvania, 1887, president of the Lebanon (Pa.) common council, died at his home in Lebanon, Pa., after a short illness, from intussusception of the bowel, November 1, aged 44.

Charles G. McKinley, M.D. Starling Medical College, Columbus, Ohio, 1852, for many years a practitioner of Olathe, Kan., died at his home in Kansas City, Mo., October 24 from senile debility, aged 84.

Edward E. French, M.D. Pennsylvania, 1887, of Trenton, N. J., died in St. Francis' Hospital, Trenton, October 20, from nephritis, after an illness of four years, aged 49.

Carlos Wilcox, M.D. Des Moines, 1887, died at his home in Huron, S. D., October 2, from cerebral hemorrhage, after a long illness, aged 67.

John Frank Lane, M.D. St. Louis, 1889, of Linn, Mo., was drowned while attempting to ford a flooded creek near his home, October 24.

Joseph P. Gregory, M.D. University of Louisville Medical Department, 1873, died suddenly at his home in Gainesville, Ark., October 16.

Penfield B. Goodsell, M.D. Vermont Medical College, Woodstock, 1852, died at his home in Roxbury, Boston, October 24, aged 70.

Charles T. Weatherly, M.D. Atlanta (Ga.) Medical College, 1874, died at his home in Benton, Ala., October 23, aged 53.

Miscellany

THE DEMAND OF THE SOUTH FOR FEDERAL CONTROL OF QUARANTINE.

The following excerpts are from editorials that have recently appeared in newspapers of the southern states. To these are added quotations from a few northern papers. We comment editorially on the subject on page 1576.

Alabama.

"With a rational but thorough national quarantine law, with the government health department in full control, we might expect fairness and intelligence in carrying out and enforcing its provision. . . . The ability of the federal government to handle such matters is universally recognized, and the ability of local governments to combat the foe is suspected if not entirely scouted. . . . After all objections have been proposed and considered there remains the plain fact that the health and lives of millions of people should be among the first consideration of a government of and for all the people. If that can only be assured by a national law—and that appears evident—then there should be no more objection to such law."—*Birmingham Advertiser.*

"The hope is that the marine-hospital doctors can wholly eliminate the disease in New Orleans before frosts fall. If they can do that public sentiment will demand that interstate and international quarantine be placed in the hands of the federal government, thus doing away with the rivalry between states, with all commercialism, in a matter pertaining to health and life. The public health outranks trade at every step. The *Atlanta Journal* joins the increasing ranks of those who demand federal control of quarantine. Public sentiment is rapidly crystallizing in all the cotton states in a demand for federal control of quarantine."—*Birmingham Age-Herald.*

Florida.

"Pensacola asks that all seaport towns join her in this request, and also the request that congress pass a general quarantine law, and we see no objection whatever to such action if the nation is more successful and resourceful in its methods of operating such law than the states are."—*Pensacola News.*

"But precautions against the transmission of disease through the ordinary means of transportation, where they are necessary at all, must be subject to some general regulation, such as the federal officers alone can exercise."—Jacksonville *Times-Union*, from Philadelphia *Public Ledger.*

Georgia.

"One result of the yellow fever epidemic in Louisiana has been to convert many doubters and scoffers to a firm belief in a national quarantine system and government control in case of epidemic."—Savannah *Press.*

Louisiana.

"It is recognized that the desired uniformity of quarantine, that will be equally strong in all its parts, can be secured only through the federal government."—New Orleans *Democrat.*

"The ruinous and barbarous quarantines established by small communities against the world, the stoppage of United States mails and interstate traffic has resulted in a demand by the press of the country for a scientific and uniform quarantine service such as can be exercised and maintained only by the national health organization."—New Orleans *States.*

"The *Times* rejoices to know that the Louisiana Press Association, through its president, Charles E. Schwing, of Plaquemine, has begun an agitation looking to federal control of the quarantine regulations throughout the country. This paper, at the very beginning of the present yellow-fever epidemic, pointed out the senselessness of some of the quarantines established by various communities, and advocated placing this power of quarantine in the hands of the national government. In a subsequent article, the *Times* sought to emphasize the importance of uniform regulations among the states, pointing out that this could not be hoped for unless needed authority is vested in a supreme, independent and impartial department, such as the Public Health and Marine-Hospital Service of the United States."—Shreveport *Times.*

Missouri.

"Adequate and uniform precautions can not be taken unless under the direction of some central authority. This means that the whole scheme of quarantine at the great ports of the country should be under charge of the national authorities. . . . National quarantine is what the country wants for all its ports, and the coming Chattanooga conference ought to start a movement which will secure congressional legislation along that line."—St. Louis *Globe-Democrat.*

"Governor Blanchard expresses himself as being in favor of federal control of maritime quarantines and is also inclined toward such control of interstate quarantines."—From an interview with Governor Blanchard of Louisiana.

Mississippi.

"For the protection of the coast—seaports—I am in favor of vesting absolute authority in the federal government."—From an interview with Governor Vardaman.

Tennessee.

"As a matter of economy, then, as well as policy, desirability and safety, as explained yesterday, the entire South should take up this federal marine quarantine at once and use its best endeavors to induce the government to establish it at the earliest possible moment."—Memphis *Commercial-Appeal.*

"The board of health of Pensacola, Fla., has adopted strong resolutions favoring national control of quarantine regulations at all southern seaports and urges the Florida congressional delegation to urge the same. The sentiment expressed by the people of Pensacola has become very general in the south since this last outbreak of fever at New Orleans, and there are strong reasons for believing that the opposition hitherto manifested by southern representatives will be withdrawn and the principle of national control of quarantine established. The press of the south is very nearly unanimous for the proposition."—Chattanooga *Times.*

"There is a growing sentiment in the South, and all over the country as for that, for a federal quarantine law. The *News*, like a great many other newspapers in the South, has not jumped into this popular wave and demanded that a law be passed at the next session of congress establishing federal quarantine, but under sensible regulations we believe that such a plan would be best for the whole country."—Chattanooga *News.*

"In view of these facts, it is declared to be the sense of the Pensacola board of health 'that the quarantine of all seaport towns should be under the charge and control of the general government.' The *American* unqualifiedly indorses the conclusion of the Pensacolans. It has long been the opinion of this newspaper that the general government is the only power capable of handling quarantine matters in such emergencies."—Nashville *American.*

Texas.

"Indeed, now that the importance of a strict quarantine is appreciated, and to avoid those embarrassments which proceed from conflicts of state laws and quarantine, the whole matter of public health, as far as contagious or infectious diseases are concerned, may be turned over to the federal government, with the consent of the states."—Galveston *News* and Dallas *News.*

Northern Opinions.

"Sentiment in favor of a national quarantine service appears to be practically unanimous among those who are able to take an unprejudiced view of the matter. The Philadelphia *Press* remarks that the more rapid, the more complete and the more sweeping the change from the patchwork state quarantines wrangling on the Gulf to federal authority the better. State quarantine has lasted its day. It is an expensive and useless nuisance. It is no more needed than state harbor lights, a state immigrant service or any other regulation of foreign or interstate commerce. The day for shotgun quarantine has passed in this country. The New York *Evening Post* thinks that a national quarantine service is brought distinctly nearer by the appeal of Louisiana to the federal government and suggests that congress will undoubtedly be called on to make the powers and the duties of the national government larger and more precise in all that relates to oversight of the public health. These views are in entire accord with what was said by the *Bee* some days ago. . . . The demand that is being made for a national quarantine service should not be allowed to die out with the subsidence of the yellow fever, but should be pressed on congress until there is legislation giving the national government absolute control over quarantine. Existing law does not go far enough."—Omaha (Neb.) *Bee.*

"The question of physical health is put first, and it is very important. An outbreak of yellow fever in the south, with no common purpose or provision to meet it, throws the people into a panic that produces scenes and acts of almost indescribable inhumanity. Shotgun quarantines are a disgrace to civilization, and the only remedy—if there is a remedy—is in concert of action and standing means to meet such emergencies. The national power should be invoked."—Washington (D. C.) *Star.*

"In no section of the United States is the principle of home rule as formulated in the doctrine of state rights so firmly established as in the South. Southern communities are tenacious of their local police powers. This being so, some surprise may be felt at the unanimity of the sentiment now prevalent throughout the portion of the South which has experienced or feared the yellow fever in epidemic form in favor of the surrender of their quarantine system to the federal government and of turning over the campaign against the mosquito to the Marine-Hospital Service."—New York *Times.*

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

STATUS OF GASTRECTOMY.

NORTH PLATTE, NEB., Nov. 8, 1905.

To the Editor:—I would like to know through THE JOURNAL the present status of the operation of removing the whole stomach and whether the operation has ever been performed with satisfactory results. D. T. QUIGLEY.

ANSWER.—The entire stomach has now been removed several times for carcinoma and patients have lived for from several months to two years, usually dying from metastatic carcinoma. Cases suitable for total removal of the stomach are, of course, rare. So far as the functional results are concerned after complete removal of the stomach, they have been satisfactory.

POSTGRADUATE COURSE IN BERLIN.

WORTHINGTON, MINN., Nov. 9, 1905.

To the Editor:—In THE JOURNAL, November 4, you gave a brief review of a post-graduate course to be given in Berlin next spring at the time of the dedication of the "Empress Friedrich House." Can you give me the time when these lectures will take place and the address of some one with whom I can correspond for further information? HENRY WIEDOW.

ANSWER.—The cycle of lectures is to be given during March and April, 1906. Professor R. Kütner is general secretary of the postgraduate movement (Zentralkomitee für das ärztliche Fortbildungswesen). His address is Eisholzstrasse 13, Berlin W. 30. He is editor of the journal issued by the central committee. His report for the five years since the committee was organized was recently published by J. S. Preuss, Berlin, in a book of 114 pages, giving the details and work accomplished by the postgraduate movement in Prussia.

METHYLENE BLUE TEST FOR TYPHOID URINE.

PARKERSBURG, W. VA., Oct. 28, 1905.

To the Editor: A friend of mine has called my attention to a new test of the urine, methylene blue, in typhoid fever. Will you give some information about it, where we can find literature concerning it, etc.? W. H. SHARP.

ANSWER.—The test is sometimes called Russo's test. The original paper is found in *Riforma Medica*, vol. xxi, No. 19, 1905. A partial abstract of the paper appears in THE JOURNAL, vol. xlv, 1905, p. 363. The technic of the test is very simple and is as follows: Four drops of a 1 to 1,000 aqueous solution of methylene blue are added to 4 or 5 c.c. of suspected urine. If the reaction is positive the mixture turns to an emerald or mint green hue. A light green or bluish green tint shows a negative reaction. The positive reaction is not affected by boiling the urine or the previous ingestion of such compounds as phenacetin, salol, quinin, calomel, etc. It is given as early as the second day of the disease and persists throughout its course. The mint green hue is first noted and the emerald green hue appears as the dis-

ease progresses. If the course is favorable the tone becomes more and more bluish, while if unfavorable the emerald tint persists. The chief point in favor of the test is its simplicity. It is also quite as reliable as the diazo reaction of Ehrlich. It is, however, given in cases of measles, smallpox, chronic and suppurative tuberculosis. It is not given in varioloid, varicella, scarlet fever, miliary tuberculosis, appendicitis and other conditions. The difficulty in the application of the test comes in the ability to recognize the various tints of green which may be present. With a little practice, however, the positive reaction may be readily detected. The fact that the test is not given in a miliary tuberculosis, appendicitis, varicella, etc., makes it invaluable as an aid in differential diagnosis.

State Boards of Registration

COMING EXAMINATIONS.

Board of Registration in Medicine in Massachusetts, State House, Boston, November 4-15. Secretary, E. B. Harvey, Boston.

Connecticut Medical Examining Board, City Hall, New Haven, November 14-15. Secretary, Charles A. Tuttle, New Haven.

State Board of Health of Louisiana, New Orleans, November 14-15. Secretary, F. A. Larue, New Orleans.

State Board of Health of West Virginia, Clarksburg, November 14-16. Secretary, H. A. Barbee, Pt. Pleasant.

Wyoming Board of Medical Examiners, Cheyenne, December 6. Secretary, S. B. Miller, Laramie.

Examining Board representing the President and Fellows of the Medical Society of Delaware at Dover, and the Homeopathic Board, Wilmington, December 12. Secretary, P. W. Tomlinson, Wilmington.

Ohio State Board of Medical Registration and Examination, Columbus, December 12-14. Secretary, F. Winders, Columbus.

Medical Examining Board of Virginia, Richmond, December 12-15. Secretary, R. S. Martin, Stuart.

State Board of Health of Missouri, Kansas City, December 19-21. Secretary, J. A. B. Adcock, Warrensburg.

Board of Medical Examiners State of California, San Francisco, December 20. Secretary, Charles L. Tisdale, San Francisco.

Board of Medical Examiners of Maryland, Baltimore, December 13-16. Secretary, J. McScott, Hagerstown.

Montana October Report.—Dr. W. C. Riddell, secretary of the Board of Medical Examiners of Montana, reports the written examination held at Helena, Oct. 3-5, 1905. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 75. The total number of candidates examined was 24, of whom 16 passed and 8 failed. The following colleges were represented:

PASSED. College.	Year. Grad.	Per Cent.
Syracuse University	(1902)	80
Kentucky School of Medicine	(1902)	77.7
University of Tennessee	(1901)	75.1
University of Minnesota	(1894) 77.6; (1904) 80,	81.6 84.4
Barnes Med. Coll.	(1905)	75.1
Hahnemann Med. Coll., Chicago	(1898)	82.7
American Medical Missionary, Coll., Chicago	(1903)	79.1
University of Vermont	(1903)	75.8
Med. Coll. of Virginia	(1904)	76.9
Med. Coll. of Ohio	(1897)	82
Jefferson Med. Coll.	(1905)	82.7
University of Boston	(1905)	78.7
Rush Med. Coll.	(1903)	77.4
FAILED.		
Hamline University	(1903)	41.3
Rush Med. Coll.	(1900)	64
Illinois Med. Coll.	(1898)	68.5
University of Nebraska	(1905)	55.1
Missouri Med. Coll.	(1878) 26.5;	(1884) 50.4
University of Vermont	(1895)	59.4
American Med. Miss. Coll., Chicago	(1905)	71.5

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending November 11:

Hess, Louis T., asst.-surgeon, ordered to Fort Lawton, Wash., for duty.

Collins, C. C., asst.-surgeon, ordered to Fort Walla Walla, Wash.

Pyles, Will L., asst.-surgeon, ordered to Jefferson Barracks, Mo., for duty.

Rafferty, Ogden, surg., granted two months' leave of absence.

Reynolds, Chas. R., asst.-surgeon, assigned to duty as surgeon on transport *Logan*, next voyage to Manila, where, on arrival, he will report to commanding general, Philippines Division, for assignment to duty.

Wadhams, S. H., asst.-surg., granted 30 days' leave of absence, with permission to apply for 30 days' extension.

Adair, Geo. W., asst.-surgeon general, granted 15 days' leave of absence.

DeWitt, Wallace, asst.-surgeon, granted 30 days' leave of absence.

Frick, Euclid B., surgeon, ordered to assume temporary charge of chief surgeon's office, Department of Dakota, during the absence of Col. Adair, on leave of absence.

Edwards, Jas. F., asst.-surgeon, granted leave of absence from November 17th to and including December 31, 1905. His resignation as an officer of the army has been accepted by the President, to take effect December 31.

Furnell, Julius M., contract surgeon, ordered to Alcatraz Island, Cal., for temporary duty.

Barney, Fred M., contract surgeon, arrived at Fisherman's Point, Cuba, for duty.

Daywalt, George W., contract surgeon, left Fort St. Philip, La., on sick leave for seven days.

Waddell, Ralph W., dental surgeon, arrived at Fort Crook, Neb., for duty.

Boak, S. Davis, dental surgeon, left Fort Washington, Md., on leave of absence.

Carpenter, Alden, dental surgeon, arrived at Boise Barracks, Idaho, for duty.

Ames, Roger P., contract surgeon, arrived at Fort Saint Philip, La., for duty.

Jones, George H., contract surgeon, returned to duty at Fort Fremont, S. C., from leave of absence.

Byars, Caspar R., contract surgeon, returned to Fort Sam Houston, Texas, from duty at Fort Sill, Okla.

Dickenson, Clarence F., contract surgeon, left Fort Logan, Colo., and arrived at Fort Douglas, Utah, to accompany 22d Battery, Field Artillery, on overland march to Fort Riley, Kans.

Slater, Ernest F., contract surgeon, arrived at Washington Barracks, D. C., for temporary duty.

Adair, George F., contract surgeon, left Fort Wadsworth, N. Y., on leave of absence for fifteen days.

Navy Changes.

Changes in the Medical Corps U. S. Navy, for the week ending November 11:

Riggs, C. E., surgeon, detached from the *Dolphin* and ordered home to wait orders.

Spratling, L. W., surgeon, detached from the naval station, New Orleans, and ordered to the navy yard, League Island, Pa., November 15.

Thompson E., surgeon, ordered to the navy yard, Charleston, S. C.

McDonald, P. E., P. A. surgeon, detached from the naval dispensary, Washington, D. C., and ordered to the *Dolphin*.

Plummer, R. W., P. A. surgeon, detached from the navy yard, Charleston, S. C., and ordered to the naval recruiting rendezvous, Kansas City, Mo., November 15.

Riggs, R. E., asst.-surgeon, ordered to the *Franklin*.

Michaels, R. H., asst.-surgeon, detached from the naval recruiting rendezvous, Kansas City, Mo., and ordered home to wait orders.

Diehl, O., surgeon, detached from the *Baltimore* and ordered home to wait orders.

Spear, R., surgeon, ordered to the Baltimore.

Pryor, J. C., surgeon, detached from the naval medical school, Washington, D. C., and ordered to the naval dispensary, Washington, D. C.

Brownell, C. de W., surgeon, ordered to the naval recruiting rendezvous, Providence, R. I.

Richards, T. W., surgeon, ordered to the naval hospital, Norfolk, Va.

Thompson, J. C., surgeon, detached from the naval recruiting rendezvous, Providence, R. I., and ordered to the Asiatic station, via the *Lawton*, sailing December 1.

Murphy, J. F., asst.-surgeon, detached from the naval recruiting rendezvous, Buffalo, N. Y., and ordered to Washington, D. C., December 4, for examination for promotion, and then to wait orders.

Guthrie, J. A., asst.-surgeon, detached from the navy yard, League Island, Pa., and ordered to the naval recruiting rendezvous, Buffalo, N. Y.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending November 8.

Lavinder, C. H., P. A. surgeon, granted leave of absence for one month from November 6.

McMullen, John, P. A. surgeon, granted leave of absence for one month from November 7.

Currie, D. H., P. A. surgeon, relieved from special temporary duty in New Orleans and from temporary duty in San Francisco, and directed to proceed to San Francisco quarantine station for duty.

Amesse, J. W., P. A. surgeon, relieved from special temporary duty in New Orleans and from duty in Seattle, Wash., and directed to proceed to Ellis Island, N. Y., reporting to medical officer in command for duty.

Berry, T. D., P. A. surgeon, granted leave of absence for one month to take effect from date of being relieved in New Orleans.

Rucker, W. C., assistant surgeon, granted leave of absence for seven days.

Collins, Geo. L., assistant surgeon, leave of absence granted Assistant Surgeon Collins for sixteen days from October 31, 1905, amended to read sixteen days from November 1.

Ashford, E. A., asst.-surgeon, granted leave of absence for five days from November 4, under provisions of paragraph 191, regulations.

Mullan, E. H., asst.-surgeon, granted leave of absence for five days from November 2.

Mullan, E. H., asst.-surgeon, granted extension of leave of absence for five days, from November 7.

de Valin, Hugh, asst.-surgeon, relieved from special temporary duty at New Orleans and directed to proceed to Baltimore, reporting to medical officer in command for duty and assignment to quarters.

Alexander, E., acting asst.-surgeon, granted leave of absence for six days from November 10.

Cleaves, F. H., acting asst.-surgeon, granted leave of absence for five days, beginning November 6.

Goldsborough, R. W., acting assistant surgeon, granted leave of absence for two days from November 4.

Stevenson, J. W., acting assistant surgeon, granted leave of absence for thirty days from November 6.

Tappan, J. W., acting assist.-surgeon, granted seven days leave of absence from November 6, under provisions of paragraph 191, regulations.

McDonald, Jeannette, medical inspector, granted leave of absence for eighteen days, from October 23.

Stearns, W. L., pharmacist, granted three days leave of absence effective from date of being relieved.

Goodman, F. S., pharmacist, granted leave of absence for twenty days from December 12.

Thurston, E. J., pharmacist, granted leave of absence for fifteen days, from November 10.

Spangler, L. C., pharmacist, granted leave of absence for thirty days from November 5.

BOARD CONVENED.

A board of officers was convened to meet at the Bureau on call of chairman for physical examination of Chief Engineer H. F. Schoenborn, R. C. S. Assistant Surgeon-General W. J. Pettus, chairman; Asst.-Surgeon H. McG. Robertson, Recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon general, Public Health and Marine-Hospital Service, during the week ended November 13:

SMALLPOX—UNITED STATES.

California: San Francisco, Oct. 21-28, 5 cases.
Louisiana: New Orleans, Oct. 21-28, 5 cases.
Michigan: Kalamazoo, Oct. 27-Nov. 4, 2 cases.
Ohio: Springfield, Oct. 26-Nov. 3, 1 case.

SMALLPOX—FOREIGN.

Africa: Cape Town, Sept. 16-23, 1 case.
Brazil: Para, to Oct. 14, 56 cases, 14 deaths; Rio de Janeiro, Sept. 17-Oct. 8, 36 cases, 9 deaths.
Canada: Toronto, Oct. 28-Nov. 4, 1 case.
Chile: Antofagasta, Oct. 14, 65 cases, 18 deaths; Coquimbo, 16 cases, 5 deaths; Iquique, Sept. 30-Oct. 7, 23 cases, 5 deaths.
Cuba, La Salud, Oct. 28, 1 case, imported from Canary Islands.
Ecuador: Guayaquil, Oct. 3-17, 12 deaths.
Great Britain: Liverpool, Oct. 14-21, 7 cases.
India: Madras, Sept. 30-Oct. 6, 3 deaths.
Italy: General, Oct. 12-19, 16 deaths; Catania, Oct. 5-12, 2 deaths.
Mexico: City of Mexico, Aug. 26-Oct. 21, 26 cases, 12 deaths.
Russia: Odessa, Oct. 7-14, 8 cases, 1 death.
Spain: Barcelona, Oct. 10-20, 4 deaths.
Turkey: Constantinople, Oct. 1-15, 5 deaths.

YELLOW FEVER—UNITED STATES.

Florida: Pensacola, Aug. 29-Nov. 3, 555 cases, 78 deaths.
Louisiana: Assumption Parish, to Oct. 21, 48 cases, 2 deaths; East Carroll Parish, to Oct. 26, 341 cases, 41 deaths; Iberia Parish, to Oct. 21, 14 cases, 1 death; Jefferson Parish, to Nov. 3, 507 cases, 55 deaths; Lafourche Parish, to Nov. 3, 447 cases, 60 deaths; Orleans Parish, New Orleans, July 21-Nov. 8, 3,389 cases, 459 deaths.
Mississippi: Vicksburg and vicinity, Aug. 30-Nov. 4, 180 cases, 27 deaths.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Sept. 17-Oct. 8, 9 cases, 3 deaths.
Ecuador: Guayaquil, Oct. 10-17, 1 death.
Honduras: Choloma, Oct. 17-24; 3 cases, 1 death; San Pedro, 2 cases.
Mexico: Coatzacoalcos, Oct. 22-28, 1 case; Omealca, 4 cases, 4 deaths; Tezonapa, Oct. 22-28, 1 case, 1 death; Tierra Blanca, 1 case, 1 death; Tuxtepec, 7 cases, 6 deaths; Vera Cruz, 2 cases.
Panama: Bocas del Toro, Oct. 14-21, 2 cases.
Venezuela: Maracaibo, Aug. 20-27, 1 case, 1 death.

CHOLERA—FOREIGN.

Germany: General, to Oct. 21, 280 cases; 90 deaths.
India: Madras, Sept. 29-Oct. 6, 119 deaths.

PLAGUE—INSULAR.

Hawaii: Honolulu, Oct. 30, 2 deaths.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Sept. 17-Oct. 8, 37 cases, 17 deaths.
India: General, Sept. 16-23, 4,695 cases, 3,192 deaths; Bombay, Oct. 3-10, 26 deaths; Karachi, Oct. 1-8, 19 cases, 18 deaths.
Peru: Lima, Sept. 21-30, 4 cases, 2 deaths; Mausche, 3 cases, 2 deaths; Paita, 3 cases.
Zanzibar: Zanzibar, Oct. 28, present.

Medical Organization

Public Lecture on Disease and Hygiene.

The Oakland (Cal.) *Enquirer* inquires: "The Chicago Medical Society is offering a series of free public lectures. Why are such things denied the people of this city? Are not physicians of Oakland as able, progressive and public spirited as those of Chicago?" The people of every city are entitled to such lectures. The county medical society has the machinery to provide them.

California and Texas.

DR. MCCORMACK'S WESTERN TRIP.—Dr. McCormack continues his western tour. Reports from California indicate a varying degree of response on the part of the profession, but agree that a very great deal of good has been accomplished. October 24 Dr. McCormack addressed a joint meeting of the Santa Barbara, Monterey and San Luis Obispo (Cal.) county medical societies. At Pasadena, October 26, he addressed a meeting of the Pasadena branch of the Los Angeles County Medical Society. From California Dr. McCormack entered Texas, addressing meetings at El Paso, October 30, and at San Antonio on November 1. The latter was the semi-annual meeting of the Fifth Councilor District Medical Society, and the program included papers by Dr. John B. Deaver and Dr. Joseph Price of Philadelphia and Dr. Lewis McMurtry of Louisville. There was a two days' session and over one hundred members were in attendance. Dr. McCormack addressed the physicians of Austin on November 3, and was to have addressed the Jefferson County Medical Society on November 4, but a delay caused cancellation of that engagement. He met with the Galveston County Medical Society November 6, and on the following day addressed the Harris County Medical Society at Houston.

Society Proceedings

COMING MEETINGS.

Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 12-14.
American Dermatological Association, New York, Dec. 28-30.
Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

AMERICAN ACADEMY OF MEDICINE.

Thirtieth Annual Meeting, held in Chicago, Nov. 9-10, 1905.

The President, Dr. Winfield S. Hall, Chicago, in the Chair.

Report of Committee on Laws Regulating the Practice of Medicine.

DR. CHARLES MCINTIRE, Easton, Pa., secretary, presented the details of the changes in the laws and the statistical part of the report in printed form. The academy began the study of laws relating to the practice of medicine in 1880, and the report gives some of the results of this 25 years' investigation. Some of the imperfections of these laws are: 1. The lack of uniformity. 2. The relation of vagarious practitioners. Each state, by special legislation, by exemption in general legislation, or by sufferance, permits certain classes of people to perform the office of a physician without the tests required by the state for doctors in medicine. The report suggests that the general practice acts should recognize this by providing for "limited licentiates in medicine," who would be examined only on the elementary subjects. As these laws are to protect the people, they should not take cognizance of any special system. Each one should have liberty to treat disease after his own sweet will, but only after he has demonstrated to the state officials that he possesses such knowledge as the legislature has decided is necessary for the proper protection of the citizens. 3. The laws do not accept the statement of the medical college as final. This has been thought to have been necessary because some medical schools have been found not to have acted in good faith. The result is a somewhat mechanical statement of requirements. Time will right this, and the future laws will accept a diploma without going behind the returns. 4. Another weakness is the provisions for the transfer of a legal practitioner from one state to another. The report suggests that authority be given to each board to accept the license of another state at its value and to make such additional tests as may be required. 5. The laws too frequently fail to protect those who are licensed. They should provide for some official whose duty it is to search out and prosecute the unlicensed and those who are abusing their licenses. The report favored having osteopaths represented on state medical examining boards.

DISCUSSION.

DR. CARL H. VON KLEIN, Chicago, referred to the gradual evolution that is taking place toward higher medical education. America is not behind in this progressive movement. In some medical schools the courses of instruction are equal to those established in foreign countries, but the preliminary education of American medical students has not reached as high a standard in this as it has in foreign countries.

DR. LEARTUS CONNOR, Detroit, called attention to the origin of medical laws, who originated them, and for what purpose. He said there are two parties involved—*first*, the people, and, *second*, the physicians themselves. Physicians can not enact laws themselves, but they join with the people in accomplishing this. But physicians have been the prime factors in establishing these laws, sometimes with a selfish purpose in view. He thinks that if physicians had looked disinterestedly after the interests of the people first, rather than their own interests, there would have been no need of any medical laws.

DR. B. D. HARISON, Sault Ste. Marie, Mich., did not agree with the recommendation in the report that osteopaths should be admitted as members of state medical examining boards, and recognized as a part of the medical profession. The Supreme Court of Kentucky holds that the osteopath is a masseur. It is held by the Supreme Court of another state that osteopathy comes within the field of medicine. He referred to the Michigan law regarding osteopathy and osteopaths, and said it is only a matter of time when osteopaths will be driven out of that state. He favors letting them alone, as they will work out their own salvation or damnation.

DR. R. O. BEARD, Minneapolis, believes that if we raise the standard of the medical profession we will not need medical legislation half so much as it is needed now. It is a question of the "survival of the fittest," and he thinks it will not be very long, after the medical profession has attained that standard of educational and professional fitness, before the bogus colleges will be relegated to the position of barbers, plumbers, etc. The legislative side of the question is more difficult to deal with, as physicians are not expert and successful in securing the enactment of laws.

DR. JOHN M. DODSON, Chicago, said that, urged by the medical profession, some literary schools have arranged their work so as to prepare young men better for the study of medicine. Some institutions of general learning are now pursuing the plan of supplying courses in chemistry, physics, general biology, and others in human anatomy, histology, bacteriology and embryology. The work they are doing should be recognized for what it is worth and not be arbitrarily rejected. He believes that the position which the Minnesota State Board of Medical Examiners has taken, in regard to examining graduates from other states than Minnesota, is absolutely untenable from a legal point of view, inasmuch as the Minnesota law does not say that a student shall have spent four years in a medical college, but says the student must have spent four years in the study of medicine in a recognized college. He thinks the whole question resolves itself into an interpretation of the law by the board, which is applied to the college instead of the individual.

Report of the Committee to Tabulate the Value of the First Degree.

DR. DONLY C. HAWLEY, Burlington, said that the committee found it necessary to make a prefatory study before attempting the definite work assigned to it. This study included two questions: 1. What is a college course intended to do? 2. What are the elements which, when compounded, make the physician? 1. A college is a factory where the value of the finished product depends on the character of the raw material furnished. It also depends on the process employed; but no process will cause a transmutation of metals. Unless the gold be in the ore, none can be found in the end-products. 2. To obtain material on which to base the answer to this question, a circular letter was sent to a large number of physicians, medical teachers and others, and college presidents. The replies received were studied by the committee, and are also included in the report as an appendix.

The questions were: 1. What is the character to be desired of the neophyte in medicine? To what extent can it be developed by educational processes? And what class of studies is adapted to bring it about? 2. What mental discipline is essential that a student may profitably benefit by a medical course? 3. What facts should be in possession of the intending medical student before he enters on his medical studies? Can the acquisition of these facts be used to train the character and the mind?

It is admitted that sometimes the man with a limited training outstrips his fellow with greater scholastic advantage. There must be something underlying which educational processes can not supply. He must be self-reliant, able to arrive at fair conclusions based on accurate observation, and to follow such conclusions with confidence. He must also have a bull-dog tenacity, a love of seeking scientific facts apart from preconceived theories, and sympathy with mankind. These are foundations, and every trait which will make an honorable man and cultured gentleman will be helpful. Having a student of this type, what should be the mental discipline to produce the best result? He should be taught to observe accurately and to interpret honestly the results of observation, to know how to study, to think logically, and train his memory to be of ready service. He should be educated, first, for the man, then for the physician. And, on the whole, the course in colleges leading to the A.B. degree seems to be fitted for this better than any other course. Besides, the mind so furnished should be in possession of certain facts to be used directly in the prosecution of medical studies. These include a knowledge of elementary physics, that it may understand its application in physiology and elsewhere; such a knowledge of chemistry as to make it necessary to teach only medical chemistry in a medical course; and general biology that the student can understand the study of life processes in man in an intelligent manner.

DISCUSSION.

PROF. C. S. LOSEY, Northwestern University, Chicago, emphasized that part of the report of the committee that students preparing for medicine should be advised to elect or to select studies in their college course, so that they may have two or three years of work in chemistry and biology, and that they be advised to take up such studies as histology, embryology and comparative anatomy. Some institutions are pursuing such a course at the present time.

DR. LEARTUS CONNOR, Detroit, said a four-year course of study in medicine will give a man a broader outlook; it will give him imagination to look forward to what he ought to become; to have a broad sympathetic outlook of those with whom he has to do. The service of the physician reaches far beyond the peddling of pills or the opening of abdomens. The practice of medicine requires a vigorous body, and a college course ought to show the student what sort of body he has; whether he can endure the long strain of days and nights, of anxious thought about critical cases, etc. A man can not go through college and mingle with others without becoming a thinking machine, more or less. The man who has not got a good imagination, who can not see his operation before him with his eyes shut, so to speak, is not an educated physician. He is a mechanism and not a doctor.

DR. CARL H. VON KLEIN, Chicago, emphasized the value of an academic training preliminary to the study of medicine. The man who is academically well trained, other things being equal, makes a good physician. A man should not be discouraged because he fails in his first examination, as there are notable instances of men who failed in their first examinations, yet subsequently became great. Among others, he instanced Bismarck.

PROF. H. B. WARD, University of Nebraska, said that the heterogeneous character of our educational system in the United States as a name means nothing; that there must be some other form of test applied, some other measure than the mere name of an institution, if we expect to get anything like uniformity in the preliminary preparation of students before their entrance on the study of medicine. Those who have not followed the development of modern college education are not aware of the extent to which, even in small colleges, the elective system has been introduced. Formerly a college course meant in the same section of country, or in a group of affiliated colleges, more or less, the same training; not only four years, but four years applied relatively to certain lines, with some philosophy, some mathematics, some science, some literature, and some history. The modern college has made a departure from this. Even the most conservative colleges have introduced different courses which go under different names, but which in many, if not in all, cases lead to the same degree, and in general the degrees of B.S. and B.A. are apparently on a par with reference to future training. He deplored the fact that there is not a series of recognized studies leading

toward medicine as there is toward theology, law and other vocations.

PROF. JAMES G. NEEDHAM, Lake Forest University, favors teaching general biology in colleges, letting the medical schools teach it as it applies to the human body. He would have the colleges teach general embryology and vertebrate embryology, but let the medical schools teach those aspects of embryology that apply to the human being and to the practice of medicine. The same should be done in other subjects. These colleges can teach certain branches to greater advantage than they are now being taught in medical schools.

DR. BURTON D. MYERS, University of Indiana, said he has been studying seriously the best means of developing and furnishing a preliminary education. The aim of those in authority in this university is not to establish another medical school, but a medical department of the better kind, and they are ready to require four years of collegiate work, if they are convinced that this would be essential. The man who enters on the practice of medicine ought to be able to use the English language correctly, to express himself clearly and concisely. He ought to be able to read French and German.

The report was further discussed by Drs. Daniel T. Nelson, John M. Dodson, Professor Halsey, R. O. Beard, and B. D. Harison.

The committee asked that the report be referred to the council for action and recommendation as to whether the investigation shall be continued, and it was so done.

Report of the Committee on Teaching Hygiene.

DR. HELEN C. PUTNAM, Providence, R. I., visited over seventy classes in domestic science in 18 different cities and about as many in nature study, in elementary, high, normal and special public schools. The actual practice of principles of hygiene in domestic science and the actual observation of biologic details and physical phenomena in the teaching of the sciences (called nature study in elementary schools) were briefly compared with the method of memorizing from books and talks. The committee reserved its recommendations until it has reported on the other direct methods of teaching hygiene in the public schools.

Altruism in the Medical Profession.

DR. WINFIELD S. HALL, Chicago, stated that the first law of life is the preservation of self; but the second and higher law is the preservation of others. He summed up the biologist's interpretation of egoism and altruism in the following general principles: (1) All the activities of living organisms may be classified as egoistic, those that nourish and protect the individual; and altruistic, those that maintain and protect the race. (2) Altruistic activities invariably involve on the part of the individual sacrifice of self for the good of the race. Every profession, every occupation, in life affords its opportunities for altruism, but he who chooses the medical profession must do so with the knowledge that to be a useful and successful member of that profession he must subordinate self to the welfare of his fellow-men. The true physician is solicitous, above all, for the patient's welfare, and not only ministers to his immediate needs, but seeks so to instruct him that, when restored to health, he may, by right living, maintain it continuously, thus needing no further professional service from his physician. This is a manifestation of altruism so nearly universal in the medical profession that the physician loses caste in his profession if he fails in the discharge of this obligation. A higher degree of altruism is manifested by those who sacrifice a gain commensurate with their abilities in order to inspire, guide and uplift the youth. The work of the true teacher is always altruistic. The teacher must always take a part of his remuneration in the satisfaction which he derives from the molding of a character and in the joy which he experiences in the inspiration of lofty ambition.

The higher the order of altruism, the fewer there are who attain it. Voluntary sacrifice of life in order that other lives may be saved is the highest order of altruism. This height of sacrifice has been attained by a comparatively small number only; a number, however, that should include the names of many unknown heroes who have gone to their death while ministering to the sick in plague-stricken places, leaving no record of their heroism. Organized for the purpose of advancing the standards of medical education, of advancing the boundaries of medical science, of elevating the profession and of preventing disease, the work of the American Academy of Medicine has been altruistic from the time of its organization to the present. The field of its activities is ever widening and always along altruistic lines. If he were asked to make a general recommendation, it would be that the academy accept as its field of endeavor the altruistic responsibilities and activities of the medical profession, definitely outlining a program of research to be prosecuted along various lines, such as education, school hygiene, state medicine, ethics, etc. This research should be followed by carefully directed and persistent effort to accomplish that which the research reveals to be advantageous to society.

DR. CASEY A. WOOD, Chicago, delivered an interesting lecture, which was elaborately illustrated by numerous colored stereopticon slides, on the "Eyes and Eyesight of the Lower Animals."

Officers.

The following officers were elected: President, Dr. Donly C. Hawley, Burlington, Vt.; vice-presidents, Drs. Helen C. Putnam, Providence, R. I.; George W. McCaskey, Fort Wayne, Ind.; Henry B. Favill, Chicago, and James T. Searcy, Tuscaloosa, Ala.; secretary and treasurer, Dr. Charles McIntire, Easton, Pa.; assistant secretary, Dr. Samuel C. Stanton, Chicago.

The next meeting will be held in Boston, June 2 and 4, 1906.

(To be continued.)

MEDICAL SOCIETY OF THE STATE OF DELAWARE.

Annual Meeting, held in Wilmington, Oct. 10, 1905.

The president, Dr. Alexander Lowber, Wilmington, in the Chair.

(Continued from page 1254.)

Sanatorium Treatment of Consumption.

DR. ALEXANDER LOWBER, Wilmington, in his annual address, stated that, during the year 1900, there were 110,000 deaths from consumption in the United States. He urged teaching the general public that tuberculosis is an inoculable disease, conveyed largely through the agency of the sputum; the avoidance of promiscuous expectoration; the necessity for proper disinfection by the state boards of health; the sanitary supervision of workshops, places of public resort, hotels, steam and trolley cars, etc. Early diagnosis, informing the patient of the nature of his illness, and the treatment of the general condition of the patient, are essential factors, as the further advanced the disease is the less chance there is for recovery. Sanatorium treatment is essential, and among the important features thereof he mentioned constant life in the open air: sleeping either in the open air or in a room sufficiently open on all sides; good feeding; judicious exercises; stimulation of the vital forces, and special respiratory exercises to increase the lung capacity, together with special, individual instructions to every patient. He enumerated the number of sanitariums in the different states and territories, as well as in foreign countries, and gave a résumé of the work they had accomplished.

DISCUSSION.

DR. J. J. BLACK, New Castle, urged that the profession appeal to the legislature in order to secure the establishment of a state sanatorium. The place to attack consumption is in the slums, among the indigent and ignorant. Much can be done to prevent the spread of the disease by educating these people to the proper care of themselves and the proper precautions necessary for the safety of others. He did not believe that climate had much influence on the effect of the sanatorium treatment.

DR. GEORGE WILLIAM MARSHALL, Milford, stated that he believed the chief reason the state sanatorium had not been established was the lack of funds in the state treasury.

DR. A. ROBIN referred to the practice, when the sanatorium treatment is begun, of giving the patient a large number of eggs, which are sometimes indigestible, owing to the large amount of hydrochloric acid and gastric juice required for their proper assimilation. He believed that the reason a meat

diet is so successful is because it stimulates the secretion of the gastric juice and produces more hydrochloric acid.

DR. W. H. HANCKER, Farmhurst, stated that in the institution established for the care of the tubercular insane they had cured nearly all the cases referred to them, with the exception of those in the very advanced stages, the treatment employed being outdoor exercise, plenty of fresh air, nourishment and a meat diet, in conjunction with the eggs.

Autointoxication as a Causative Factor in Disease.

DR. ALBERT ROBIN, Wilmington, classified autointoxication as endogenous and exogenous. Endogenous autointoxication includes the toxins generated by the various tissue cells in the course of their normal biologic activity, the so-called cytotoxins, and the poisons formed during nutrition metabolism. Exogenous autointoxication is caused by the poisons generated in the gastrointestinal tract as a result of bacterial action, as well as the specific toxins generated by bacteria. The cytotoxins are closely related to the bacterial toxins and they cause disease in the same manner. Their continuous menace to the organism is overcome by the antitoxins which are continuously generated in the body by certain cells, probably those of the ductless glands. When this natural immunizing balance is disturbed, disease is the result. Nephritis, hepatic cirrhosis, and various nervous diseases are probably caused by the failure of the organism to neutralize its own toxins. The metabolic poisons generated in the course of normal nutrition are oxidized in the liver and eliminated through the emunctories. Failure of such oxidation and elimination causes disease. The exogenous poisons and toxins are also neutralized by immunizing substances, oxidized in the liver and eliminated through the emunctories. Autointoxication, therefore, may result (1) from non-neutralization of the cytotoxins which are normal end-products of cellular life; (2) from failure on the part of the liver to destroy the poisonous products of metabolism (hepatic insufficiency); (3) from the failure on the part of the kidneys to eliminate the free toxins (renal insufficiency), and (4) from gastrointestinal disturbances which favor intestinal fermentation. The rational treatment of autointoxication resolves itself into an early recognition of the underlying factors, and the application of such remedies as stimulate the production of antitoxic substances by the tissue cells, the destruction of the poisons by the liver and their elimination by the various emunctories.

Acute Septic Inflammations of the Mouth and Throat.

DR. J. A. ELLEGOOD, Wilmington, referred to the gravity and high mortality of many cases of acute septic processes occurring in this region, and stated that from an etiologic and pathologic standpoint they are identical with erysipelas as occurring in other parts of the body. The clinical character is peculiar on account of their primary occurrence in the mucous membrane, the peculiar and complex anatomic arrangement of the parts involved, and the proximity to the larynx. The clinical features of some of the more severe forms are described. Ludwig's angina is referred to as being an inflammation of the same nature as a septic laryngitis or pharyngitis, the distinction being more of an anatomic than of an etiologic character. Acute inflammation may be followed by ulceration. Milder forms occur, varying in degree from the slightest ulceration to those displaying the greatest malignancy. On account of the anatomic structure of the parts, the tonsils most frequently are the seat of primary infection, and most cases begin as an apparently ordinary form of tonsillitis. Although a great variety of micro-organisms are capable of exciting or taking part in septic processes, the streptococci and staphylococci are regarded as the chief offending agents, at least, in the milder cases. Among the predisposing causes, attention is called to the probable influence of autointoxication, and to the possible good results that may be attained by means of intravenous injection of saline solutions, both with and without general blood-letting. Serum therapy is discussed at length. In case a bacteriologic diagnosis is impossible, the use of an antistreptococcal or of a polyvalent serum is advised. Particular stress is laid on prophylaxis.

Thrombosis of the Popliteal Artery Complicating Typhoid.

DR. WILLIAM CHANDLER PIERCE, Wilmington, cited the case of a man, age 38 years, who had been under the treatment of a physician for two weeks for typhoid fever. Examination confirmed this diagnosis and also revealed marked discoloration of the left leg from the knee down; the leg, foot, toes and skin were very dry, smooth and like leather to the touch, the discoloration ranging from black on the toes to dark-brown and gray on the foot, and shades of brown and gray on the leg. The leg emitted a distinct odor. On inquiry it was elicited that four days previously the patient had suffered from pain in the back of the leg, and that at this time the leg began to change color. There was no pulse in the popliteal artery and no glycosuria. A diagnosis was made of dry gangrene following thrombosis of the popliteal artery complicating typhoid. Amputation of the lower third of the thigh was advised when the patient's condition should improve sufficiently to admit of it. The patient died shortly afterward in convulsions.

Fracture of Patella.

DR. JAMES A. DRAPER, Wilmington, cited the case of a man who had fallen from a telephone pole, sustaining a compound fracture of the thigh about midway, and a fracture of the patella. The fracture of the thigh was treated by wiring, and there is no appreciable shortening. In the treatment of fracture of the patella, he had applied a ring pessary and posterior splint, which has proven very satisfactory.

Discussion on Autointoxication.

The discussion on the papers was opened by DR. H. BROOKER MILLS, Philadelphia, who called attention to the fact that, while Dr. Robin's paper primarily related to autointoxication, the others also bore on this subject, as the patient in the case reported by Dr. Pierce clearly died from a general poisoning or autointoxication resulting from a local origin, and many cases of infection of the mouth cause a general intoxication. He reported the case of a Civil War veteran, who had been treated by a number of prominent physicians, for 237 carbuncles, when finally autointoxication was discovered and treated, and the man cured. He also referred to two cases of epilepsy, who had had attacks for years, at least every two weeks, in which he had made the diagnosis of autointoxication of intestinal origin, and originated treatment along the usual lines therefor, including intestinal enemata, with the result that the disease is now entirely cured, apparently neither patient having had an attack within the past two years. He called attention to the necessity for a thorough movement of the bowels daily, and carefully distinguished this term from a daily movement, and, in the detection of these conditions, urinalyses and the determination of the amount of indican, acetone and urea are of the utmost importance. The fecal examination, he felt, should not be omitted, as, while it might be somewhat difficult and require considerable apparatus and time, the results would more than compensate the physician therefor. The use of large doses of purgatives was not recommended; calomel in doses of 1/12 of a grain every hour for twelve hours, followed next morning by phosphate of sodium, a teaspoonful in a glass of hot water one hour before breakfast was cited as a valuable remedy, and, if this does not sufficiently open the bowels, colonic irrigation by means of a long, soft rubber rectal tube should be employed. He called attention to the important part which the skin played in the function of elimination, and urged the stimulation of its activity by drinking large quantities of water between meals. Venesection was considered a mode of relief, but was not felt to be practicable in many, especially the very anemic cases. In conclusion, he called attention to the facts (1) that autointoxication is much more common than it is realized, and (2) that many diseases, local and constitutional, which seem to be difficult of diagnosis are, in reality, due to this condition, and urged the correction thereof, not by large doses of powerful drugs, but simply by emptying the colon by means of the bladder, bowels and kidneys and by careful dietetic and hygienic regulations.

DR. J. A. ELLEGOOD, Wilmington, felt that Dr. Mills did not make sufficiently clear the difference between autointoxication and ptomain poisoning, the former being produced by chemical leucomains arising from within the body caused by the disturbance of the normal metabolic changes, while the latter are caused entirely by extrinsic substances, and that there was a danger of attributing too many conditions to autointoxication.

DR. SWITHIN CHANDLER, Philadelphia, stated that autointoxication arose solely from causes arising within the body, and not by the absorption of germs introduced from without, and that, while he believed it was important to lay stress on the proper evacuation of the colon, this would have no effect on the conditions produced by germs from without the body, etc. Attention should be given, he stated, to the secondary, as well as the elementary effect of any article—for instance, food that produces uric acid should not be given, not so much for the fact that it produces uric acid as because of the changes that will take place between the proteids and uric acid to make up the by-products and cause autointoxication, and the kidneys should be observed, as much because of the irritation produced as because of their function of elimination. The cases reported by Drs. Ellegood and Pierce, he felt, were cases of toxemia, but not autointoxication.

DR. WILLARD SPRINGER, Wilmington, called attention to the fact that the infection in Dr. Pierce's case arose within the body, and that consequently it was an autointoxication.

DR. CLEAVER stated that in cases of diabetes and other similar conditions which result in blocking up the secretion of the urine there is no doubt that marked toxemia does occur, and cited such authorities as von Jaksch and Nothnagel in support of this position. While he did not feel that flushing of the colon would relieve all cases of diabetes, he believed there was no doubt that some pronounced toxemias were cured thereby.

DR. A. ROBIN, Wilmington, felt that many of the cases of strict infection were complicated by autointoxication and secondary toxemia, as in the case of gangrene, the secondary infection occurring therein was produced by the formation of putrefaction from the gangrene, which is just as much autointoxication as anything else. The same is true in a case of secondary infection in a case of typhoid, the typhoid bacillus is the primary infection, but autointoxication may arise from other matters generated within the body by reason of this specific germ. He called attention to the fact that he believed the reason the autointoxication was not manifest in all cases was due to the fact that there were certain other cells in the body producing antitoxins, which neutralize the toxins produced by the liver and other organs, and called attention to the necessity for stimulating the function of the antitoxin cells.

DR. H. BROOKER MILLS, Philadelphia, stated that, while he did not believe all cases of diabetes or epilepsy could be cured by colonic irrigation, yet, if they could be proved to be due to reflex or other irritation having its origin in the gastrointestinal tract, he believed this to be the most important agency known to medicine for the relief thereof. He felt that in any cause in which the poison arose within the body it must be classed as autointoxication, and believed that the cases of both Dr. Pierce and Dr. Ellegood could be properly classed under this class.

The next annual meeting is to be held in Wilmington Oct. 9, 1906.

NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

Regular Meeting, held Oct. 3, 1905.

The President, Dr. Arthur P. Hitchens, in the Chair.

Ventrosuspension of Uterus.

DR. SWITHIN CHANDLER directed particular attention to the importance of absolute certainty in diagnosis, and stated that fixation should be undertaken only by a surgeon competent to perform the most difficult abdominal operation. He reviewed the various operations employed, including the intraperitoneal shortening of the round ligaments, the Alexander operation, and considered the suspension of the uterus by suturing the fundus uteri to the peritoneum to be the ideal procedure, but did not believe in the use of the pessary. He also urged careful technic, and particularly that no blood be left in the abdominal incision.

DISCUSSION.

DR. M. P. WARMUTH felt that the fixation operation was the one that should be done in the majority of cases, at the same time repairing any lacerations of the pelvic floor and removing endometritis, if present, by curettage. He reported several cases of ventrofixation which had subsequently caused complications, which are particularly likely to occur during subsequent pregnancies.

DR. LUTHER C. PETER felt that if the statistics of the operator were supplemented by those of the general practitioner they would probably show up somewhat different, and referred to the case of a multipara, aged 30, in whom an Alexander operation had been done with absolutely no results.

Etiology and Treatment of Constipation.

DR. HERMAN A. BRAV stated that constipation is more frequent in females than in males and in adults than in children. One of the prominent causes in women is uterine trouble, and among the results are rectal disease, anal fissure, ulceration of the rectum and sigmoid flexure, proctitis and periproctitis. Headache, loss of memory and inability to concentrate thoughts are prominent symptoms. The causes of the condition are mechanical obstruction; defective peristaltic action; deficient intestinal secretion; deficiency of liquid; nervous instability, etc. The underlying cause should be diagnosed and treatment directed to the removal thereof. Stricture of the sphincter ani he believed to be one of the chief causes, and this should be remedied by dilation under local or general anesthesia. The treatment he outlined as follows: Light diet; plenty of fruit, such as oranges, figs, apples, stewed prunes; drinking a tumblerful of water on rising in the morning; regular hour for defecation; avoidance of sedentary life; purgatives should not be given, and only medication of the mildest possible kind. The injection of olive oil, use of electricity and massage, in conjunction with hygienic and dietetic measures, are of value. The exact treatment must be decided for each individual case.

DISCUSSION.

DR. SWITHIN CHANDLER emphasized the importance of paying strict attention to the diet, and called attention to the fact that some of the cereals, if taken repeatedly, have a tendency to cause the condition, and urged as a routine measure the thorough examination of the patient to discover the causative element.

DR. WENDELL REBER referred to the fact that many cases of constipation show a peculiar condition of the optic nerve, with intense fullness of the lymph tubes, as indicating defective elimination, and urged as important factors in the treatment a cold sponge bath in the morning and hygienic and dietetic regulations.

DR. CARLE LEE FELT referred to the case of a girl suffering from constipation who had been treated for a long time by drugs, electricity, etc., with absolutely no effect, when strychnia was pushed to tolerance, which quickly cured her. When she returned again, two or three years later, the same drug quickly gave relief.

DR. LUTHER C. PETER stated that a great many nervous conditions can be traced to constipation as a causative factor. He considers strychnia as one of the best drugs for combating the condition.

DR. ALBERT BERNHEIM believed that the constant use of purgatives was detrimental, and that many of the patients who report to the physician that they have a daily bowel movement in reality have feces impacted around the edge of the colon, while the center might be in a condition which would cause diarrhea. The mode of dress, particularly in women, has much to do with the production of the condition; horseback riding has been proved to be a causative factor. Enema may be given for a long time without any deleterious results, preferably by means of a soft rubber tube. Glycerin, eserin, massage, etc., are of value.

DR. LEWIS S. SOMERS recommended that the patient be instructed to spend a longer time at stool, during which his whole mind should be on this act, no books or papers, etc., being taken to the closet by the patient. He referred to the work of Dr. Stucky, of Kentucky, who has been treating cases of pharyngitis by washing out the bowel several times a week, followed by injections of half a pint of olive oil, and claims to be securing good results.

DR. BRAV stated that he believed the condition of the eyegrounds to be an important diagnostic factor in these cases, and that frequently headaches result from reabsorption of the liquid part of the feces. Constant use of drugs and purgatives

is harmful, as is also the constant employment of enemata, as this causes an overdistension of the bowel. He urged thorough digital examination in every case.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Earache.

Lake, in the *Clinical Journal*, in the treatment of this condition mentions among local measures a combination of the so-called oil of hyoscyamus with a little of the tincture of opium; he advises the application of opium salve over the mastoid and along the canal, and equal parts of olive oil and chloroform dropped in the ear. Carbolized glycerin, he states, is useful, as also douches containing opium, morphin or cocain. Of all these remedies, few equal and none excel the local application of chloroform vapor. Especially in the case of children these remedies must be carefully considered and it is often advisable to dispense with opium, which is badly borne by children, and to use hyoscyamus, belladonna or carbolic acid. Other therapeutic aids in this condition are hot compresses, hot irrigations and counterirritants.

Considering the treatment in the relation of the causes of earache, the author recommends a free incision of the drum. This gives the most speedy relief when the inflammation is confined to the middle ear. If the inflammation is extended beyond the middle ear the incision will only partly relieve the symptoms; at the same time leeches should be applied over the mastoid fairly close to the auricle, and hot irrigations and hot compresses should be applied, frequently repeated. The author believes that in the chronic suppurative otitis media the radical mastoid operation gives very satisfactory results. In case of furunculosis of the meatus he states that if pus has escaped from a furuncle before the physician sees the patient, and the pain is subsiding rapidly, all the treatment necessary is a thorough antiseptic cleansing of the meatus, preferably with an alkaline solution, and the use of peroxid of hydrogen, or a 10 per cent. solution carbolized glycerin. If, however, the physician sees the patient before relief from pain has been obtained, not only should he make an incision, passing completely through the center of the furuncle, but the incision should be carried down to the cone, the contents of the furuncle should be removed by a small scoop and the cavity packed.

Infantile Convulsions.

Cautley, in the *Clinical Journal*, gives the following treatment for this condition:

When summoned to a child in a convulsion the physician should take with him chloroform, a chloral hydrate solution of known strength, amyl nitrite, solution of morphin, and a hypodermic syringe. [Morphin and chloral hydrate must be used with extreme caution in children.—Ed.] Probably the attack will be over by the time he arrives, or, if not, the child will have been undressed and given the usual hot bath, with or without mustard in it. As soon as the attack starts the child should be laid down, with the head a little raised, and the clothes loosened or removed. All unnecessary disturbance must be avoided and the child kept quiet. A bath of from 95 to 100 F. may be given, with a view to relieving the congestion of the brain, or a dry mustard pack may be employed as less disturbing. After the child has been in the bath for five minutes it must be wrapped up in hot blankets. The bath is most useful in cases due to colic and is contraindicated in convulsions due to syncope or collapse of the lung. It does not interfere with other measures of treatment. While in the bath and after, cold affusions should be applied to the head by cloths wrung out in cold water or by an ice cap. The lower bowel can be washed out by salt solution, one dram to half-pint of warm water, or sodium sulphate in the proportion of half an ounce to half a pint for an older child; or a glycerin enema may be given. After the bowels have acted, a small rectal injection of chloral hydrate should be given, grains 3 to 10, according to the age of the child; potassium bromid may be combined with the chloral. The rectal injection should not be of more than two ounces bulk for a child aged 1 year, and the buttocks must be held together for a few minutes after injection. [The child must be carefully watched after the administration of chloral or the bromid, and these drugs should be used with great caution.—Ed.] Should there be evidence of the existence of unsuitable food in the stomach, vomiting may be induced by tickling the fauces with a feather or by ipecacuanha wine between the spasms. As a rule, irritant food has passed through the pylorus before the attack is induced. As soon as the child can swallow a dose of calomel should be given. It empties the intestinal tract and relieves cerebral congestion. Emetics should be avoided at this stage.

As soon as the secretion of urine is abundant it is evident that the kidneys are working efficiently and that active treatment can be discontinued. Abundant urination may be looked on as a critical phenomenon announcing the speedy termination of the convulsion. After the attack the child must be kept quiet for a few days on a light diet, and the bowels carefully regulated. During sleep the room must be kept well ventilated, the feet warm and the head raised. Borax, salts of zinc, belladonna and valerianate of zinc may be of use in the treatment.

When there is definite disease the treatment is naturally that appropriate to the disease. All sources of reflex irritation should be attended to, such as adenoids, enlarged tonsils, worms, genital irritation, and ear and eye troubles. The general health and diet should be most carefully watched and tended. The drugs most useful in prevention of infantile convulsions are cod liver oil, malt and iron. In treatment of epilepsy in older children bromids should be given for at least two years, and may be combined with salt starvation. The addition of opium is sometimes useful. Borax, belladonna, the salts of zinc and the valerianates are the next most useful drugs.

In all cases careful attention must be paid to the intestinal tract; constipation remedies and intestinal antiseptics are to be given if necessary. The diet should be plain and unseasoned and should contain little meat. As a rule the regularity of school life is beneficial, but it may be injurious from the effects of teasing by other children, excitement, and over mental pressure for examination. On the whole, it is advisable that a child with epileptic fits should, if possible, be brought up at home in the country, under the care of an intelligent tutor, and should live the life of a healthy animal and learn to earn a living at some outdooor occupation involving more or less physical labor.

Thompson, in *International Clinics*, discusses the treatment from a causative standpoint, first considering the treatment of the child while in the attack. The child should be placed in a warm bath, with or without mustard in it. If mustard is used, about two tablespoonfuls to the gallon is recommended. The child may be placed in a mustard pack and kept there from ten to fifteen minutes. If, however, the fit is prolonged for more than five minutes, or recurs at short intervals, it is best to administer chloroform to control the convulsive movements. Chloral hydrate is another effectual remedy, but as the infant is unable at the time to swallow, it must be administered either hypodermically or injected into the bowels through a rubber catheter.

In the new-born infant with convulsions resulting from injury received during birth sedatives are of little value. The child should be kept as quiet and warm as possible and attention given to its nourishment.

For convulsions in the dyspeptic infant sedatives are of small service. The bowels should be cleansed with a dose of calomel and castor oil and the diet should be modified. Attention should be given to the breast milk. When breast milk is not possible special care should be used in the preparation of a substitute.

In so-called idiopathic convulsions in young babies, expectant treatment, bromids and treatment of the alimentary canal are a waste of time. Chloral should be used (with great

caution), the dose varying with the age of the child. This to be continued until the attacks have entirely ceased for from six to eight hours or more, and if not speedily effectual, the dose can be increased until the child begins to get too drowsy to swallow his milk. When the convulsions have entirely ceased for some time the intervals between the doses is gradually lengthened. Usually within three or four days the medicine can be discontinued without any return of the convulsions.

In "teething fits" or "rickety fits" the diet must be regulated on antirachitic lines, and cod liver oil should be given, with or without phosphorus. It is important to see that the child has plenty of fresh air and cold douches given once or twice daily. For these the infant is placed in an inch or so of warm water in front of a fire, and a large jugful of cold water (from 60 to 70 F.), is promptly poured over the shoulders and back. The child is then taken out and rubbed until dry and warm. Under this regimen the child's health improves and all tendency to convulsions soon disappears.

In convulsions caused by serious cerebral defects the result of treatment is very discouraging. Bromids may sometimes be of use. Generally, however, when given in doses large enough to affect the attacks, they interfere considerably with the child's general health. Anything which produces a distinct improvement in the child's general condition, however, may diminish the number and severity of the attacks. Thus a change to the country or the timely administration of a tonic may diminish or stop them for many weeks. In some few cases thyroid substance has a good effect.

Medicolegal

Advertising Monthly Regulators Forbidden.

Chapter 167 of the Public Acts of Connecticut of 1905 amends Section 1157 of the General Statutes, which prescribes a penalty for encouraging the commission of abortion, by inserting "or who shall advertise any so-called monthly regulator for women," shall be fined not more than $500.

Wood Alcohol to be Labeled "Poison."

Chapter 75 of the Public Acts of Connecticut of 1905 amends Section 4734 of the General Statutes of that state by adding "wood or methylic alcohol under any name or in any mixture" to list of drugs which said section requires that the bottle, box, or wrapper containing same when sold shall be marked "poison," except when for use in manufactures or the arts, etc.

May Establish a Bacteriologic Laboratory.

Chapter 162 of the Public Acts of Connecticut of 1905 provides that the state board of health may establish and control a bacteriologic laboratory where examination of supposed morbid tissues for the diagnosis of infectious diseases shall be made, free of expense, on the application of registered physicians or health officers, and may provide necessary buildings and apparatus, employ bacteriologists and assistants, and do all things necessary for the proper conduct of such a laboratory.

"Heart Failure" Not Sufficient as Cause of Death.

Chapter 21 of the Public Acts of Connecticut of 1905 amends Section 1862 of the General Statutes by inserting therein the words, "a certificate of death giving heart failure, paralysis of heart, cardiac incompetence, cardiac exhaustion, heart weakness, collapse of heart, cardiac syncope, cardiac paralysis, or any like term having the same meaning as heart failure, shall not be deemed sufficient on which to issue a burial or removal permit, and such certificate must be returned to the physician who made it for the proper correction and definition."

No Preservative or Coloring Matter for Meats.

No. 46 of the Laws of Pennsylvania of 1905 provides that if any person, firm or corporate body shall, by himself, herself or themselves, or by his, her or their or its agents or servants, sell, ship, consign, offer for sale, expose for sale, or have in possession with intent to sell, as fresh, any meat, poultry, game or shell fish which contains any substance, article or ingredient possessing a preservative character or action, or which contains any coal-tar dye, or any other substance or ingredient possessing a coloring character or action, shall be deemed guilty of a misdemeanor, etc.; provided, that nothing in this section shall prohibit the use of ice as a preservative, or proper refrigeration.

Regulation of Practice of Optometry.

Chapter 96 of the Laws of New Mexico of 1905 is entitled "An act to regulate the practice of optometry and for the appointment for the board of examiners in the matter of said regulation." It defines the practice of optometry as the employment of subjective and objective mechanical means to determine the accommodative and refractive states of the eye and the scope of its functions in general. It provides that every person, before beginning the practice of optometry in this territory, after the passage of this act, shall pass an examination before said board; examination shall be confined to such knowledge as is essential to the practice of optometry. But nothing in this act shall be construed to apply to physicians and surgeons authorized to practice under the laws of the territory of New Mexico.

May Admit Holders of Certificates from Other States.

On page 212 of the Laws of Missouri of 1905 is an act which amends Section 3 of the act regulating the practice of medicine by adding thereto the words: "And it is further provided that the said state board of health may at their discretion admit without examination legally qualified practitioners of medicine who hold certificates to practice medicine in any state or territory in the United States, or the District of Columbia, with equal requirements to the state of Missouri (and that extend like privileges to legally qualified practitioners from this state), on the applicant paying a fee of $25." The words here inclosed in parenthesis are, however, omitted from the statement of the proposed amendment in the first part of the amendatory act.

Cocain to be Sold Only on Prescription.

On page 145 of the Laws of Missouri of 1905 is an act which provides, under penalty, that it shall not be lawful for any druggist or other person to retail, or sell, or to give away any cocain, hydrochlorate, or other salt of or any compound of cocain, or preparation containing cocain, or any salts of or compound thereof, except on the written prescription of a licensed physician or licensed dentist, licensed under the laws of the state, which prescription shall only be filled once; provided, that this shall not apply to sales in the usual quantities at wholesale by any manufacturer or wholesale dealer when such manufacturer or wholesale dealer shall have affixed to the box, bottle or package containing such cocain, hydrochlorate or other salt or compound of cocain or preparation containing cocain, a label specifically setting forth the proportion of cocain contained in any preparation.

Restricts Sale of Cocain, Eucain and Their Salts.

Chapter 127 of the Public Acts of Connecticut of 1905 provides that it shall be unlawful for any person, firm, or corporation to sell, furnish, or give away any cocain, salts of cocain, eucain or its salts, or any preparation containing any cocain, or salts of cocain, or eucain or its salts, except on the original written order or prescription of a lawfully authorized practitioner of medicine or veterinary medicine, which order or prescription shall be dated, and shall contain the name of the person for whom prescribed, or, if ordered by a practitioner of veterinary medicine, shall state the kind of animal for which ordered, and shall be signed by the person giving the prescription or order; and such written order or prescription shall be permanently retained on file by the person, firm, or corporation who shall compound or dispense the articles ordered or prescribed, and it shall not be recompounded or dispensed a second time except on the written order of the original prescriber; provided, however, that the provisions of this act shall not apply to sales at wholesale by jobbers, wholesalers, and manufacturers to retail druggists, nor to sales at retail by retail druggists to regular practitioners of medicine, dentistry, or veterinary medicine, nor to sales to hospitals, colleges, or scientific or public institutions.

Sanitarium for Treating Incipient Tuberculosis.

On pages 292-7 of the Laws of Missouri of 1905 is an act which provides for the establishment, as soon as practicable,

of an institution for the treatment of incipient pulmonary tuberculosis, to be located in some suitable portion of the state, and to be known as the Missouri State Sanitarium for the treatment of pulmonary tuberculosis in its earlier stages, or, as stated in another section, to be known as "state sanitarium for the treatment of incipient pulmonary tuberculosis." Fifty thousand dollars is appropriated for this purpose. There must be not less than 160 acres of good land, which shall have an elevation of at least 1,000 feet above sea level. After this, special regard shall be had, first of all, to salubrity of location. Another point to be considered is convenience to pure and wholesome water. Some of the buildings shall be for a hospital, and others for cottage sanitarium purposes. Said buildings shall be constructed of substantial materials, the walls being of brick or stone, the interior subdivisions to conform, as near as may be, to the most modern improvements, having reference to the comfort and convenience of the inmates therein; they shall be as near fireproof as practicable, with partitions and fire walls between the wards; also such facilities for egress as will insure safety in case of fire. There shall be a board of managers, to consist of five persons, two of whom at least shall be practicing physicians of good repute, and all to be appointed by the governor, subject to the confirmation of the senate.

Emergency Fund Provisions for Epidemics and Disasters.

No. 219 of the Laws of Pennsylvania of 1905 appropriates $50,000 for the purpose of creating an emergency fund, to be used, as occasion may require, by the state board of health in the suppression of epidemics, prevention of disease, and protection of human life in times of epidemic disease or of disaster threatening disease, beyond the ability of the local authorities to check or relieve. This money shall be held in the treasury of the commonwealth, and whenever the secretary of the state board of health shall find that the public health is threatened, either by epidemic or as a result of great disaster, to such an extent that the local authorities are unable to meet the emergency, he shall prepare a statement to that effect, rehearsing all the facts in the case, and the reason for considering that state aid is needed, and to what amount, and transmit the same to the governor. If the statement and the reasons therein set forth shall meet with the approval of the governor, he shall certify and file the statement and certificate of approval in the office of the auditor general, who shall then draw his warrant on the state treasurer for the amount approved by the governor, and place the same in the hands of the treasurer of the state board of health, to be used for the purpose set forth in the statement approved as aforesaid, and for no other purpose. If, after the said epidemic shall have been suppressed, or the sickness or danger averted, there shall still be a balance of the amount drawn left in the hands of the treasurer of the state board of health, he shall, without delay, return the same to the state treasurer, and it shall become part of the said emergency fund. He shall also file with the auditor general a specifically itemized statement, made under oath, of the expenditures of said moneys, as soon as possible.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

November 4.

1 *Examination of the Leucocytes as an Aid to the Diagnosis and Prognosis of Disease. T. R. Brown, Baltimore, Md.
2 *Dilation and Curettement for Dysmenorrhea. G. R. Holden, Baltimore.
3 *Method of Administering Mercury in Syphilis. O. Lerch, New Orleans, La.
4 *Intranasal Drainage of the Frontal Sinus. E. F. Ingals, Chicago.
5 Value of Drugs in the Treatment of Insomnia. J. S. Christison, Chicago.
6 Deflection of the Nasal Septum in Children. A. A. Bliss, Philadelphia.

1. **Examination of Leucocytes as Diagnostic Aid.**—Brown reviews our knowledge of the variations in the white blood cells in health and in disease, and the aid that may be derived from their study. He says that a thorough appreciation of the exact significance of leucocytosis will not be possible until we have definitely determined the mode of origin of the various forms of the white blood cells and their relationship to each other. Nevertheless, study of these cells in the various diseases and pathologic conditions has demonstrated beyond a doubt that their determination is of real practical help in the diagnosis and prognosis of disease. There are only a few diseases in which an absolute diagnosis can be made from the blood examination alone; in the vast majority of cases the condition of the leucocytes aids in making the diagnosis; in many cases, however, it is an important point without which the diagnosis would be even more incomplete than, of necessity, it is often forced to be. Thus, the study of the leucocytes has rendered possible the diagnosis of a certain number of diseases, as the leukemias and trichinosis, besides rendering marked assistance in the diagnosis of others, as tuberculosis, typhoid fever, pneumonia and various inflammatory and suppurative conditions. It tells much in regard to the prognosis of all forms of infection and inflammation. It has aided in discriminating diseases presenting clinical pictures markedly alike, such as central pneumonia and typhoid fever, appendicitis and conditions simulating it but of entirely different origin, peritonitis and gastrointestinal autointoxication, lymphatic leukemia and Hodgkins' disease, myelogenous leukemia and Banti's disease, measles and scarlet fever, etc. It has provided the surgeon and gynecologist with a ready means of determining, in the first place, whether or not he is dealing with inflammatory or suppurative processes; in the second place, whether the process is diminishing or increasing, while in the third place, it tells him much, if he can but read the figures aright, regarding the prognosis of his cases. Leucocyte counting, says Brown, has not and never will reach the point at which it and it alone will furnish us with an absolutely correct diagnosis and prognosis, but in the past it has been a great, and it will be in the future an even greater help to the physician and surgeon who value correctly its possibility and its limitations.

2. **Dilation and Curettement for Dysmenorrhea.**—Holden analyzes reports received from 95 patients at periods varying from one to twelve years after dilation and curettement for dysmenorrhea. He finds that 40 per cent. were entirely or very greatly relieved for at least one year with 7 per cent. out of this 40 per cent. having a recurrence of the dysmenorrhea after one year or more; 30 per cent. had no relief at all, while the remaining 30 per cent. had but slight relief or relief for a few months only. Marked maldevelopment of the pelvic organs was present in 20 cases and in only 25 per cent. of these were the patients relieved. From a study of the character of the pains Holden concludes that the prognosis for relief after dilation and curettement is better when the pains are sharp, begin the day of the flow or the day before, and last but a day or two. The prognosis is bad when pains are dull, begin several days before the flow, and last for several days or throughout the flow. Dysmenorrhea may be caused by lurking pelvic inflammatory disease which is not recognized at pelvic examination under ether. In these cases dilation and especially curettement may make the symptoms much worse. Neurasthenia, anemia or malnutrition are frequently present. In some cases such conditions are the cause of the dysmenorrhea. To get good results from the operation these conditions must also be cured. In 61 of the cases a microscopic examination of the curettings was made. Chronic endometritis in such relation as to be a possible cause of the dysmenorrhea was present in but 4 cases, hence Holden concludes that chronic endometritis is an infrequent cause of dysmenorrhea. As but 3 out of 20 sterile married women of this series, in the child-bearing period, conceived within a year after the operation, the value of dilation and curettement in relieving sterility does not seem great. In general the procedure should be limited to cases in which there are no gross pathologic lesions, such as retrodisplacements, inflammatory disease of adnexa, or myomas, to account for the dysmenorrhea.

3. **Mercury in Syphilis.**—Lerch explains why mercury is more effective when given by inunction. He urges that in tabes and paresis antiluetic treatment should be tried, as it is often impossible to make a positive diagnosis. A certain an-

alogy between syphilis and tuberculosis has led him to give inunctions of iodoform in tuberculosis. He has had good results.

4. **Intranasal Drainage of Frontal Sinus.**—Ingals describes a method which, he says, by reason of its simplicity, thoroughness, and freedom from complications, is an improvement on other methods now in use. In five illustrative cases he explains in detail the various steps of the new operation and the instruments employed. He claims that this operation for intranasal drainage of the frontal sinus can be easily, quickly and safely done in those cases in which it is possible to introduce a probe through the nasofrontal canal. It established free drainage and furnishes a means whereby the patient, without aid, may wash out and medicate the sinus as desired. A hemorrhage can not result from this operation that could not be checked by the packing, except in hemophilia. Perforation of the cerebral wall of the sinus is impossible. The patient's consent can be obtained for this operation much more easily than for an opening through the eyebrow, and thus many cases may be cured in their incipiency that would otherwise prove very tedious and would ultimately demand a more serious operation. This operation would probably prove curative in nearly all cases of acute suppurative frontal sinusitis. It will prove curative in a large percentage of chronic cases. It will be a valuable preliminary to the radical operation in practically all cases. From the curative results in two out of three chronic cases and from the marked benefit in the third, it would appear that the advantages of this operation are so marked that it should be recommended in preference to the external operation in practically all cases, for even if a cure should not result, the conditions will be improved for a radical operation.

Medical News, New York.

November 4.

7 *Treatment of General Peritonitis. A. J. McCosh, New York.
8 Phases in the Development of Therapy. A. Jacobi, New York.
9 *Digestibility of Evaporated Cream. T. Mojonnier, Greenville, Ill.
10 Duodenal Ulcer by One of Its Victims. F. K. Cooke, Durham, N. C.
11 Pneumothorax, with a Report of a Case Complicating a Lobar Pneumonia. W. R. Stone, New York.
12 *Extravisceral Rubber Ligature in Gastroenterostomy. R. C. Coffey, Portland, Ore.

7. **Treatment of General Peritonitis.**—McCosh urges that the treatment of this condition should vary according to the etiology, duration and virulence of the disease, and also according to the resisting power of the patient. He questions the advisability of immediate operation in all cases, but he does not recommend non-operative treatment even in the majority of cases. The surgeon should always consider whether operation will give the patient the best chance for recovery. Ten years ago McCosh says he was in the habit of operating in 80 or 90 per cent. of all these cases. Now he operates in only about 50 per cent. The most important features of operation for general peritonitis are: 1, Rapidity; 2, gentleness; 3, removal of the cause; 4, postoperative elevation of the trunk and head, with corresponding depression of the pelvis. General anesthesia, as a rule, is preferable to any method of local anesthesia. Chloroform is frequently to be preferred to ether, though a mixture on an open mask is often the most advantageous. As a rule, when the cause is known, the incision should be made over the spot where lies the exciting lesion. In cases of doubt immediate incision is best. Wherever situated, a length of from 8 to 10 cm. is generally sufficient. If not, the incision can be extended during the progress of the operation. An incision of from 12 to 20 cm. does not seem to offer any advantages, and if recovery follows, is apt to result in discomfort to the patient. As a rule, an intermuscular incision is not advisable, though in lax abdomens either the McBurney or Kämmerer incision is sometimes sufficient. The incision along the outer edge of the right rectus muscle is generally the most convenient. The cause of the peritonitis is immediately sought and brought into view. At the same time it is determined whether or not the peritonitis is general. If general, irrigation through a tube is at once begun. Normal salt solution at a temperature of 110 F. is employed, through a hose of good size, and with considerable force. The rubber hose itself may be inserted, or there may be attached a long glass irrigating tube or a double current glass tube, for ingress and egress of the fluid. The irrigation is begun in the flanks and systematically carried to different parts of the abdominal cavity, terminating with a thorough washing out of the pelvis. The hand of the operator, covered invariably by a rubber glove, by gentle manipulation, helps the washing process. If the intestines have emerged from the abdominal cavity, they are carefully protected by hot towels, and flooded with hot saline solution. Generally, into the upper part of the small intestine there is injected through a large hypodermic needle 30 gm. of a saturated solution of magnesium sulphate, the puncture being afterward closed by a Lembert suture. When the peritoneal contents have been replaced, nothing remains but the closure of the wound and drainage. This is effected by the employment of one or two drains of small diameter, the remainder of the wound being closed. One of these drains generally passes into the pelvis, and often another into the loin. This latter may emerge through a stab wound made posteriorly. The "cigarette drain" is McCosh's favorite. It consists of a thin strip of sterile gauze, around which is loosely wrapped a layer or two of thin rubber tissue. In place of the cigarette drain, especially if the pus be thick, a fenestrated rubber tube is sometimes employed. He never employs for purposes of drainage unprotected gauze strips or masses of packing. A strip of gauze, carried through a glass tube into the pelvis, however, is occasionally used. For the emergence of these drains comfortable spaces are left in the wound unsutured, or the sutures may be inserted for future use, but left untied. Often while the operation is in progress, an intravenous saline infusion is given by an assistant. The smallest possible amount of anesthetic is administered. To reduce tympanites McCosh administers .002 mg. physistigmin salicylate hypodermically. A small hypodermic injection of morphin is usually administered at the close of the operation. The postoperative treatment is of importance. The patient is placed in Fowler's position for a week, the thighs being flexed over one or two pillows. Starvation is absolute until abdominal distension is diminished and until vomiting ceases. Gastric lavage is frequently given before the patient leaves the operating table, and is often continued at intervals until vomiting ceases. Drainage remains as established for thirty-six to forty-eight hours, and then its removal is begun cautiously and gradually.

9. **Digestibility of Evaporated Cream.**—Mojonnier's investigations lead to the following conclusions: 1. The protein in evaporated cream digests a little more rapidly when treated with artificial gastric juice than does that of raw, Pasteurized or boiled milk. 2. The protein in evaporated cream is almost entirely soluble in artificial gastric juice. Its total digestibility by this method compares very favorably with that of raw, Pasteurized and boiled milk. The small difference found was in favor of the evaporated cream. 3. By means of natural digestion experiments with a child and with a man, the child was found to digest evaporated cream a little more completely than did the man. It was found that in the case of the child that only 3.31 per cent. and in the case of the man only 6.81 per cent. of the entire solid matter of the food remained undigested. 4. The total digestibility of the protein in evaporated cream, after making correction for the metabolic products in the feces, in the case of the child was found to be 98.48 per cent., or very nearly what was found by means of artificial gastric juice, namely, 98.89 per cent. With the man it was found to be 93.10 per cent. 5. The butter fat and milk sugar were both very completely digested and assimilated by two subjects. The child digested 98.80 per cent. of the fat and 97.78 per cent. of the sugar. The man digested 95.84 per cent. of the fat and 96.85 per cent. of the sugar. 6. The child digested nearly 18 per cent. more of the mineral matter than did the man. This accords with the accepted theory that a child requires more mineral matter in proportion to its body weight than does an adult because its bones are growing and developing. 7. The total energy or fuel value of evaporated cream is almost entirely available to the body. The child used 97.25 per cent. and the man 94.59 per cent. of the total energy contained in the evaporated cream which they used. 8. The health of both subjects was

normal during the experiments. The child gained in weight, an average of about one pound a week and relished its diet. The man lost in body weight, but gained in protein to the amount of nearly one-third ounce of protein a day. 9. Evaporated cream, like other forms of pure milk, is an economical article of diet because its nutrients are practically all available to the needs of the body.

12. **Extravisceral Rubber Ligature in Gastroenterostomy.**—Some time ago Coffey described an operation (THE JOURNAL, Jan. 2, 1905, page 72), of entero-enterostomy in which an extravisceral silk ligature was used. This method was very similar to the one described by Coffey in this paper, except that no cut was made and the silk ligature included all the coats. Coffey found that the method first described could not be well applied with the wall of the stomach because of its great thickness. The operation is now performed as follows: First, the incision is made both in the abdominal wall and in the mesocolon in exactly the same manner as if the short loop operation were to be done with clamps or the McGraw ligature. The stomach is pushed down through the mesocolon from above, by the hand of the operator or assistant, and held there. Second, a circular button is cut with a sharp knife down to the submucous connective tissue, great care and caution being exercised not to cut the submucous plexus of vessels. As the mucous membrane is approached, the muscular fibers, both in the wall of the stomach and in the button, contract, leaving quite a wide circular cut. The same thing is done with the intestine, except that the button is made oblong, parallel with the axis of the intestine, in order not to encroach too much on the lumen of the intestine, and also to avoid the larger vessels. Third, the button and mucous membrane are picked up gently with a wide forceps like a sponge holder, or, if preferred, with the fingers; a silk or linen thread is then laid across one side of the wound, one end being held by an assistant, the other lying loose. A rubber band of the size of No. 14 braided silk is cut in two, making of it a thread instead of a band. The mucous membrane is pulled out as far as possible, without tearing or injuring it, so that as big a bite as possible may be cut out. One end of the rubber string is held with a pair of forceps by an assistant, while the operator takes the other end, with or without forceps, and proceeds to wrap the rubber around the mucous membrane, including the thread, which is to tie the rubber. If the rubber is as small as it should be, ten or twenty turns should be made. The string is tied around all the rubber to prevent slipping. The suture is continued all the way around, and the last end is tied with the end left loose for this purpose at the starting point. One of the main advantages of this operation, says Coffey, is the fact that no opening is made into the intestine or stomach at the time of the operation, hence the danger of infection is minimized.

Medical Record, New York.

November 4.

13 *Antepartum Measurement of the Fetal Head. W. S. Stone, New York.
14 *Carcinoma of the Intestinal Tract. J. P. Tuttle, New York.
15 *Quick Curative Treatment of Gonorrhea. F. A. Lyons, New York.
16 Treatment of Joint Stiffness by Means of Gradual Rectification Combined with Massage. G. Norstrom, New York.
17 *Four Cases of Essential Anemia and Their Diagnostic Differentiation. W. O. Bridges, Omaha, Neb.
18 Case of Primary Lupus Vulgaris of the Oropharynx and Nasopharynx, Treated by X-rays. H. S. Birkett, Montreal.
19 *Acute Pancreatitis. J. G. Sheldon, Telluride, Colo.

13. **Antepartum Measurement of Fetal Head.**—Stone shows that the antepartum measurement of the fetal head is as feasible as is pelvimetry, and that these measurements afford a more precise method of estimating the course of labor in contracted pelves than any other now available. They are of the greatest value in the selection of the cases suitable for premature induction of labor, and in the determination of the best time for performing it. Stone's method of measurement is described as follows: "The patient is placed in the ordinary dorsal position for an abdominal examination, and the examiner, standing by the side and placing the lower end of the patient's body, first carefully palpates and makes out the position of the head. If it is already engaged in the pelvis, it will not be practicable to measure it, but in such cases it naturally is unnecessary. The occipital and frontal poles are then grasped between the two hands, and an assistant places from below the ends of the pelvimeter between the terminal phalanges of the middle and ring fingers of the examiner, pushing them firmly inward, as the examiner directs. It is essential that the ends of the pelvimeter go between these fingers, because in palpation one naturally places the middle or longest finger nearest the two poles from which the measurements are to be taken. If placed in front of the middle finger, the pelvimeter will slide forward and the measurement will be inaccurate. An assistant or nurse is necessary in order to obtain the best results, in order that the examiner's fingers may be entirely free accurately to locate the fetal parts." A table is given showing the results obtained before and after delivery in 41 patients measured in this way. In 28 instances the postpartum measurement of the occipitofrontal diameter agreed exactly with the measurements made through the abdominal walls before labor; in 11 there was an error of 0.25 cm.; in 2 of 0.50 cm. In another table the average amount to be deducted from each occipitofrontal diameter in order to obtain the biparietal diameter is given.

14. **Carcinoma of the Intestinal Tract.**—Tuttle discusses the symptoms and indications for treatment of cancer of the intestine, these varying according to the portion of the digestive tract occupied by the neoplasm. The various segments of the alimentary tract, in the order of frequency with which they are attacked by cancer are: stomach, rectum, sigmoid, cecum and ascending colon, transverse and descending colon, vermiform appendix, duodenum, ileum and jejunum. The prognosis of cancer of the intestinal tract without surgical interference is absolutely hopeless. The fact, however, that metastasis and glandular involvement are later in this area than in any other portion of the body renders surgical interference more hopeful here than elsewhere.

15. **Quick Curative Treatment of Gonorrhea.**—Lyons reports 400 cases treated by the method brought forward by him ten years ago. In 384 of these cases the disease was cured in six days, and in about 80 per cent. of this number in twenty-four hours. The method consists of injections into the urethra of a dram and a half of silver nitrate solution, at first in 4 per cent. strength, later in 2 per cent. and 1 per cent. strength. In most cases a single injection was sufficient. When a cure was not effected by three injections the treatment was discontinued. The method depends for its effect on the fact that early in the disease the gonococci lie entirely on the outer layer of epithelial cells, multiplying on them, destroying their vitality and causing them to exfoliate. At this stage the microscope shows many gonococci on the epithelial cells. There follows congestion, afflux of serum, exfoliation of all the epithelium until the subepithelial tissue is laid bare. There will now be in the discharge few epithelial cells and many pus cells. At this time the gonococci penetrate the connective tissue. As long as there appear under the microscope epithelial cells studded with gonococci, so long are the germs within reach of the germicide, and the case is amenable to quick treatment. The exfoliation of the epithelium caused by the silver nitrate only quickens the exfoliation produced by the disease and destroys the gonococci and does no harm.

17. **Diagnosis of Essential Anemias.**—Bridges discusses the differential points in the diagnosis of acute lymphatic leukemia, splenomyelogenous leukemia, splenic anemia with atrophic cirrhosis of the liver, and pernicious anemia, and reports one case of each disease.

19. **Acute Pancreatitis.**—Sheldon suggests the following points be made the subjects of discussion by writers on acute pancreatitis: 1. The presence of glycerin in the urine, which Cammidge and Robson claim is characteristic of pancreatic disease. 2. The infectious or mechanical nature of the process in the early stages of the disease. 3. The significance of the condition of the gall bladder. He has found it distended and very tense in three out of four patients with acute pancreatitis operated on or observed at autopsy, and did a cholecystotomy in a supposed instance of acute pancreatitis twelve hours ofter the onset of symptoms, the case terminating in recovery.

Boston Medical and Surgical Journal.

November 2.

20 Relation of Animal Life to Human Diseases. T. Smith, Boston.
21 *Case of Pyloric Stenosis in an Infant. J. L. Morse and F. T. Murphy, Boston.
22 Separation of the Criminal Class from Other Insane in Institutions. C. A. Drew, Bridgewater, Mass.
23 Active Treatment of Muscular Rheumatism. B. B. Cates, Knoxville, Tenn.

21. **Pyloric Stenosis.**—In the case reported by Morse and Murphy, the vomiting began when the infant was two weeks old. Just before entering the hospital the infant passed a closed bib-pin about one inch long, which had been missing for about two weeks. The onset of the vomiting coincided pretty closely, therefore, with the disappearance of the pin. A diagnosis of chronic gastric indigestion was made, with stenosis of the pylorus to be considered. Various sorts of food were tried, and various plans of feeding were instituted, but without success, the vomiting continuing. There was nothing characteristic about the vomiting at any time. One week after admission of the patient to the hospital the lower border of the stomach was palpable just below the umbilicus, and at times visible peristalsis was made out, although it was not distinctly in waves. Two days later a mass the size of a small marble was felt about 1 cm. below and to the right of the umbilicus. The consistency and form of the mass were variable. The mass was freely movable but not tender. Operation was advised but refused. The only distinctive feature about the bowel movements was their meconium-like character. The operation, which was performed later, disclosed at the pylorus a bluish-red smooth and rounded tumor about the size and shape of a good sized dollar. The stomach was distended. Below the pylorus the entire intestinal tract was collapsed and contracted. The child died ten hours after the operation. The authors emphasize the following facts: 1. The symptoms may vary much from those of absolute pyloric obstruction, and they do not necessarily begin at birth. 2. The peculiar meconium-like character of the dejections may be of great diagnostic importance. 3. In complete or nearly complete pyloric obstruction, operation seems to offer the only hope of recovery. 4. The operation must be done before the infant has become reduced to the last degree of starvation, therefore an early diagnosis is imperative. 5. Pathologically, the condition is an entity.

New York Medical Journal.

November 4.

24 Morgagni to Virchow; An Epoch in the History of Medicine. J. L. Steven, Glascow.
25 Spirochæta Pallida in Syphilis. A. Fanoni, New York.
26 *Methods of Exploring the Abdomen, and a New One. A. H. Ferguson, Chicago.
27 *Further Contribution to the Pathogenesis of Exophthalmic Goiter. A. Gordon, Philadelphia.
28 *Chronic Headache and Its Treatment by Massage. G. Norstrom, New York.
29 *Three Vices of Blood Pressure. L. F. Bishop, New York.
30 Status of the Fetus in Utero. H. Hughes, Mankato, Minn.

26. **New Method of Exploring Abdomen.**—Ferguson points out the value of the various methods now in use of exploring the abdomen and calls attention to a new one devised by him. Through the incision for exposing the gall bladder and ducts it is his practice to see and feel all he can within a reasonable radius. It is not uncommon that appendicectomy can be performed through this incision without even extending it downward. In one instance he removed a stone in the right kidney through this incision. On the other hand, the bile ducts may be explored through the incision usually made to reach the kidney. This is done by making an incision through the peritoneum in front of the kidney, reaching inward to the gall bladder, discovering gallstones, and removing them through a button-hole incision made over the fundus of the gall bladder as it is held by the exploring hand against the anterior abdominal wall. He has also removed the appendix through the lumbar incision for kidney work. Through an enlarged gridiron incision for appendicitis he has often removed small fibroids, shortened ovarian ligaments, bisected ovaries, and he has performed anterior transplantation of the round ligaments, salpingostomy, and hysterosalpingostomy before or after removing the appendix. In cases presenting the clinical evidences of both appendicitis and gallstones, he makes a "compromise incision" through the right rectus muscle opposite the umbilicus, of sufficient length to admit the hand, which easily reaches the gall bladder and appendix respectively and if need be, the other organs within the abdomen. In certain cases, says Ferguson, an examination of the abdominal organs would be highly satisfactory, although often the operator does not feel justified in opening through the abdominal wall for that purpose. The problem is solved in passing the hand and entire forearm into the abdominal cavity through the vagina. In order to furnish enough space for this purpose, it is imperative to cut through the mucous membrane of the vagina its whole length on each side postero-laterally. The mucous membrane being severed, the other structures stretch at once. The bare arm being smeared over with sterile vaselin, glides in with ease. A number of instances are cited in which this method of examination proved exceedingly useful.

27. **Pathogenesis of Exophthalmic Goiter.**—Gordon cites a case which he considers a valuable addition to the subject of the nervous origin of exophthalmic goiter and especially to its probable origin in the medulla; interesting also, from the standpoint of evolution of the symptoms, the involvement of cranial nerves, preceding a rapid, if not immediate, development of exophthalmic goiter. A middle-aged woman while attending to her usual duties noticed suddenly that she could not raise her eyes in the normal manner; she had to throw her head backward in order to be able to look up. On the following day she noticed an inability to turn the left eye externally. A few days later a gradually coming on of prominence of both eye globes was observed. A week later the neck became enlarged in front and at the same time palpitation of the heart with tremor of the hands made their appearance. In addition to the inability to raise both eyes (more on one side than on the other) and to turn both eyes externally (more on one side than on the other), there was also difficulty to turn the eyes upward and inward or downward and inward; finally the left pupil reacted very sluggishly to light. It was, therefore, an involvement of the third, fourth and sixth nerves, unequally distributed on both sides. The syndrome of Graves' disease was present in its entirety: exophthalmos, von Graefe's sign, goiter, tachycardia (pulse 120), and tremor.

28. **Chronic Headache Treated by Massage.**—Norstrom makes a running comment of the treatment instituted by him for chronic headache of inflammatory and muscular origin. The treatment consists of massage of the muscular insertions to the cranium, of the fleshy part of the trapezius, the sternocleidomastoid, and other muscles of the neck, performed for a time sufficient to remove inflammatory deposits.

29. **Vices of Blood Pressure.**—According to Bishop, the vices of blood pressure are threefold: First, primary low arterial tension, which is met in all enfeebling disease, in great physical emergencies, and following either disease of the heart structure, or failure of the vital force and tissues of the body. Second, high arterial tension, which indicates that the circulation is laboring under stress, and due to nervous causes, such as overwork, excitement, and dissipation, or chemical causes, such as the over-ingestion of food, or the failure of kidney elimination; indeed, all the causes which can arise from a life of mental hardship combined with physical luxury. Third, secondary low arterial tension, which represents the final outcome of pre-existing high arterial tension.

Lancet-Clinic, Cincinnati, Ohio.

November 4.

31 The County Society. J. C. Larkin, Hillsboro.
32 Thirteen Cases of Scopolamin-Morphia-Chloroform Narcosis. E. G. Zinke, Cincinnati.
33 Case of Self-Castration by an Insane Epileptic; A Pathe-Psychologic Study. H. S. Allen, Hatwell.

St. Louis Medical Review.

November 4.

34 Carbonic Acid in the Treatment of Tuberculosis. A. Rose, New York.

Annals of Surgery, Philadelphia.

October.

35 *Fracture of the Spine. H. L. Burrell, Boston.
36 Case of Suture of the Spinal Cord Following a Gunshot Injury Involving Complete Severance of the Structure. G. R. Fowler, Brooklyn.
37 *Tubercular Conditions of the Spine Requiring Surgical and Mechanical Relief. De F. Willard, Philadelphia.

38 *Surgical Treatment of Intraspinal Tumors. R. H. Harte, Philadelphia.
39 *Surgical Anatomy of Small Intestine and Its Mesentery. G. H. Monks, Boston.
40 *Infection of Knee joint. C. P. Flint, New York.
41 Fibrolipoma of Stomach. H. Fischer, New York.

35. **Fracture of the Spine.**—As the result of a study of 244 cases, Burrell draws the following conclusions: Fractures of the spine may well be divided into two classes: First, fractures of the spine, with injury to the cord, and, second, fractures of the spine, without injury to the cord. It is not best to decide what the treatment of an individual case of fracture of the spine should be from the statistics, because the lesion varies so widely. In many cases of fracture of the spine it is impossible primarily to state whether or not the cord is crushed or pressed on by bone, blood or exudate, except by an open operation. Only by the persistence of total loss of reflexes, complete insensibility to touch and pain, and motor paralysis below the level of the lesion, can total transverse destruction of the cord be diagnosticated. If pressure on the cord is allowed to remain for many hours, irreparable damage may take place. Unless it is perfectly clear that the cord is irremediably damaged, an open operation to establish the condition of the cord and to relieve pressure is imperative as soon as surgical shock has been recovered from. In certain cases of fracture of the spine, when the cord is not injured, but is liable to injury from displacement of the fragments of a vertebra, rectification of the deformity and fixation of the spine may be used. If the cord is crushed, no matter what treatment is adopted, there will, of necessity, be a high rate of mortality.

37. **Tubercular Conditions of Spine.**—According to Willard, complete methodical and long-continued fixation of the spine in the position of hyperextension, with healthy surroundings in the sunlight, are the prime factors in securing new ossific deposit necessary to replace the carious bone. Laminectomy for paraplegia is advisable only after long-continued and patient treatment along these lines from one to two years, since the prognosis, especially in children, under these conditions, is favorable, and good powers of locomotion may be confidently expected. The operation is justifiable in selected cases in which loss of motion and sensation are progressively worse and the symptoms threaten life. If the tuberculous masses within the spine can be removed, and if extradural pachymeningitic deposits or pus can be taken away, improvement may be expected, and in many cases relief occurs. The operation has a mortality of about 25 per cent. from immediate shock, 36 per cent. within a month; while one-half the patients die within the year, their lives probably being shortened by the operative procedure. Cases of non-improvement and death equal nearly 65 per cent. Forcible immediate straightening of the kyphosis is an unsurgical and dangerous proceeding; it is liable to reawaken the tubercular disease and to weaken the column. Forcible gradual straightening by supporting the kyphotic area on a pedestal is a valuable agent in relieving deformity. The weight of the shoulders and pelvis can thus be utilized as straightening forces and the weight of the column thrown on the posterior arches. In this position it is permanently fixed by plaster of paris. Complete erasion of the carious bodies of the vertebræ is an uncertain operation; in the dorsal region requiring section of ribs, with danger of wounding the pleura. Wiring of the spinous processes has never been sufficiently tried to demonstrate its helpfulness. Spinal abscesses which contain only liquefaction or caseation products should be aspirated. When true pus has formed, drainage is advisable.

38. **Surgical Treatment of Intraspinal Tumors.**—Harte's paper is based on the records of 92 operations for spinal tumors, among which number 43 patients died, a total mortality of nearly 47 per cent. The nature of the tumor is recorded in 88 of the reported cases. It was sarcomatous in two-fifths of the whole number (37 cases); adhesions, thickenings, etc., hold second place, with 11 cases; then comes ecchinococcus, 8 cases; fibroma, 6 cases; syringomyelia, 5 cases; endothelioma, 4; psammona, 3; cyst, 3; fibromyxoma, 2; osteoma, 2, and one each of myeloma, lipoma, lymphangioma, dermoid cyst, primary and secondary carcinoma and one tumor of bone, the nature of which is not stated. In only three instances in which the patient recovered from the operation did no improvement follow it. Two of these were cases of inoperable sarcoma, and the third was a case of syringomyelia. Of those patients, 49 in number, who survived the operation for some weeks or months, no less than 29, or 59 per cent., recovered their functions sufficiently to be classed as cured; 17, or 34 per cent., could be classed as improved by the operation; while in the condition of only three patients, or 6 per cent., as mentioned above, did the operation effect no change. Harte includes in his figures twelve cases in which symptoms of spinal tumor were produced by meningeal thickenings or adhesions. In at least five of these cases the patients had suffered from Pott's disease of the spine in previous years, and a kyphosis still remained; but no tuberculous process was found at the operation. There are 87 cases in which the situation of the tumor with regard to the dura is mentioned; in 50 of these it was extradural, and in 36 intradural—not such a very striking difference. The death rate, moreover, in the extradural cases was even higher than that of the intradural tumors, being 50 per cent. for the former and only 47.21 per cent. for the latter. It is interesting to note that among female patients the mortality of operation has been only 45 per cent., while among the male it is 57 per cent. In searching for an explanation of this marked difference, Harte noticed that sarcomata were found one-third oftener in males than in females, and supposes that this fact may have something to do with lessening the mortality among women. Most of the operations were on adults, nearly one-half being between 30 and 50 years of age. The extremes of life were 9 years, in a boy, and 65 years, in a woman. Those patients under 20 and over 50 gave the highest percentage of recoveries. The average duration of symptoms before the operation was two years and three months. In 12 patients symptoms had existed for less than six months, in 11 for one year, in 8 for one year and a half, in 12 for two years, in 11 for three years, in 7 for four years, and in 6 for periods varying from four to eighteen years. The duration of symptoms does not throw much light on the nature of the tumor. The average duration of symptoms in the patients with sarcoma was two and three-quarters years, in those with adhesions two and three-quarter years, in those with ecchinococcus two and one-half years, and in those with fibroma one and a half years; while in all other forms of growth the average was about two and one-eighth years. A history of injury is noted in only five cases—three sarcomata, a psammoma and an endothelioma. Of 82 cases in which the region of the spine affected is given, the upper dorsal region was involved in 33 cases, or over 40 per cent.; the tumor was found in the lower dorsal region in 24 cases, in the lumbosacral region in 14, and in the cervical region in 11 cases. As far as the results are concerned, it appears to be immaterial at what level the growth is found. The cause of death is given in 28 cases. One-half of these were due to shock and hemorrhage, or to infection and meningitis, there being 7 fatal cases under each of these categories. Eight patients died from exhaustion, three from recurrence of malignant growths, two from hypostatic pneumonia, and one from bedsores and sepsis. As regards the technic of the operation, it is essentially the same as when employed in traumatic cases. After the operation no rapid improvement in the patient's condition need be anticipated; indeed, the paralysis and the anesthesia are sometimes markedly aggravated by the interference with the spinal nerves. The pain, however, is nearly always remarkably relieved; and the patient is in a more hopeful frame of mind than before the operation. The after-treatment should be the same as in every serious operation.

39. **Surgical Anatomy of Small Intestine and Its Mesentery.**—The studies reported by Monks concern that part of the small intestine which extends from the end of the duodenum to the ileocecal valve, and which is known to anatomists as the jejuno-ileum. The nature of this paper is such that it does not admit of a satisfactory summary of all the points mentioned in it. There are certain features, however, which Monks emphasizes. He attempts to show: 1. That the relative shape of the mesentery and intestine *in situ* can be best understood by arranging the intestine in a series of alternating curves on a wire, thus putting all parts of the intestine and mesentery

gently on the stretch. 2. That the mesentery may be roughly divided into two portions: (1) a proximal or flat portion, which comprises about two-thirds or three-fourths of the mesentery, and (2) a distal or ruffled portion, the "ruffled border," which comprises the remaining one-third or one-fourth. 3. That the main sheets of the mesentery alternate from above downward, going first to the left, then to the right, and finally proceeding to the iliac regions and pelvis. 4. That the fold of mesentery which descends into the pelvis can usually be palpated from a wound in the lower abdomen, and that it forms a valuable guide for the finger in the attempt to reach the left abdominal fossa. Monks suggests that this fold be known as the pelvic fold of the mesentery. 5. That the part of the ileum which is about to enter the cecum can usually be picked up from a right iliac wound with the forefinger, which, after passing into the pelvis, is curved upward around "the pelvic fold of the mesentery." 6. That while the intestine, freed from its mesentery, is straight, or nearly so, the mesentery when attached to it obliges it to follow a curved and tortuous course. 7. That, when the gut is attached to the mesentery, the free border of the gut is several feet longer than its mesenteric border, and that the free border may, therefore, properly be called "the long side," and the mesenteric border "the short side" of the intestine. 8. That the influence of the mesentery is such that the intestine is thrown into a series of alternating loops of varying shapes, sizes and planes. 9. That kinks in the intestine are usually confined to the lateral aspect of the gut. 10. That a distended and paralyzed intestine, filled with gas or semiliquid contents, does not at once empty itself through an enterostomy wound, and that the cause of this is obstruction, not only from sharp curves and kinks, but also from outside pressure on the tube, and, still further, because the fluid portions are in the dependent loops, where they act as traps to obstruct the passage of gases along the tube. 11. That, unless the intestine be "gathered up" on the tube, it is impossible to pass any instrument, hard or soft, straight or curved, into the gut without probability of soon engaging the wall of the intestine, usually in its free border. And, finally (12), that, when the size of the wound and its situation will permit, the surest method, at least on the cadaver, of determining which is the proximal and which the distal end of a loop of intestine is by palpation of the mesenteric root between the thumb and fingers of one hand.

40. **Infection of Knee Joint.**—Flint analyzes 310 cases and summarizes his paper as follows: Non-penetrating injuries, penetrating injuries, traumatic or operative, and knees independent of any injury occurring in the course of some other infectious process, or not, may present signs and symptoms not to be distinguished in the absence of bacteriologic examination from the cardinal sign and symptoms of infection. Certain of these cases are undoubtedly infected, but the data at command do not allow these to be distinguished from such as may be due to trauma and those possibly due to toxins secondary to infection elsewhere. The knee joint has certain germicidal powers. One out of every 22 operations on clean knees becomes sufficiently infected to demand operation (4.6 per cent.). One out of every 9 operations for recent (5 days) traumatic non-penetrating injury becomes sufficiently infected to demand operation (11 per cent.). One out of every 35 operations for pathologic conditions other than traumatic injuries more than five days old becomes sufficiently infected to demand operation and drainage of the joint (2.9 per cent.). One out of every 22 operations for simple fracture of the patella becomes sufficiently infected to demand operation (4.6 per cent.). One out of every 71 operations for fracture of the patella done after the fifth day becomes sufficiently infected to make operation a necessity (1.2 per cent.). One out of every 9 or 10 operations for fracture of the patella done before the fifth day becomes sufficiently infected to demand operation (10.5 per cent.). Three out of every five cases of penetrating injury to the knee joint become sufficiently infected to require operation (60 per cent.). Of compound fractures of the patella, seven out of nine become sufficiently infected to demand operation (78 per cent.). Certain knees subjected to non-penetrating injury and not operated on become sufficiently infected to require operation (10 per cent. of the operative septic cases). Certain knees become sufficiently infected to require operation where no history of trauma or other evident septic focus in the body exists (13 per cent. of the operative septic cases). Certain knees become sufficiently infected to require opening and draining the joint in the course of some evident focus of infection elsewhere in the body (11 per cent. of the operative septic cases). One out of every nine patients with infected knees which have been opened and drained dies (11 per cent.; some after previous amputation). One out of every fifteen patients with infected knees which have been opened and drained comes to amputation before recovery (6.6 per cent.). One out of every thirty-one infected knees which have been opened and drained is resected (3.3 per cent.). Most knee joints which have been infected, opened, drained, and recovered show varying degrees of functional disability, from slight limitation of motion to complete ankylosis, with or without subluxation. The average stay in the hospital of a patient operated on for infected knee joint is between two and three months. When it is once determined to open and drain the joint, the operation should be as radical as possible at the start. The position of the leg should be that giving the best mechanical drainage, i. e., the patient should be face down. The risk of infection is greatest in penetrating wounds of the knee (60 per cent.). The risk of infection is least in operations on clean knees and where there has been no recent trauma (3 to 4 per cent.).

International Clinics, Philadelphia. Vol. III.

42 Therapeutic Uses of the Roentgen Rays or Radiotherapy. G. C. Johnston, Pittsburg.
43 Action of Metallic Ferments on Metabolism, and Their Effects in Pneumonia. A. Robin, Paris, France.
44 Musculo-Tonic and Diuretic Action of Formic Acid and the Formates. H. Huchard, Paris, France.
45 Symptomatic Treatment of Tuberculosis. N. P. Barnes, Washington, D. C.
46 Opotherapic Treatment of Renal Insufficiency. Teissier, Paris, France.
46½ Serumtherapy. J. W. Wainwright, New York.
47 Mucous Colic or Membranous Colitis. A. McPhedran, Toronto, Canada.
48 Injuries and Lesions Following the Toxic Use of Alcohol. T. D. Crothers, Hartford, Conn.
49 Ulcer of the Stomach, with Contractions in a Boy Aged Fourteen Years; Cerebral Hemorrhage and Lumbar Puncture; Curable Albuminuria. J. A. Robinson, Chicago.
50 Addison's Disease. E. F. Wells, Chicago.
51 Case of Chronic Jaundice and Great Enlargement of the Liver, Due to Primary Carcinoma of the Extrahepatic Bile Ducts, Commencing at the Junction of the Hepatic Ducts. F. P. Weber and E. Michels, London.
52 Fractures of the Patella. J. S. Wight, New York.
53 Paraffin Injections by the "Cold" Process. M. Broeckaert, Ghent, France.
54 Ethyl Chlorid: Its Value as a General Anesthetic. T. D. Luke, Edinburgh, Scotland.
55 Differential Diagnosis of Tumors of the Right Hypochondrium. Th. Tuffier, Paris, France.
56 Acute Anterior Poliomyelitis with Special Reference to the Stage of Invasion. S. Brown, Chicago.
57 Paralysis Agitans: Hemiplegia; Combined Sclerosis and Ataxic Paraplegia; Locomotor Ataxia; Acute Confusional Insanity. D. E. Brower, Chicago.
58 Syphilitic Necrosis of the Frontal Bone. A. H. Ohmann-Dumesnil, St. Louis, Mo.
59 Treatment of Hay Fever and Asthma. C. H. Knight, New York.
60 Carbonic Acid Gas Application in Rhinitis. A. Rose, New York.
61 Major Trauma of the Eye in General Practice. W. T. Shoemaker, Philadelphia.
62 Gonorrhea and Conjunctivitis. W. G. Sym, Edinburgh, Scotland.
63 Cirrhosis of the Liver. R. Kretz, Vienna, Austria.

American Journal of Orthopedic Surgery, Philadelphia.

October.

64 Conclusions Drawn from a Comparative Study of the Feet of Barefooted and Shoe-Wearing Peoples. P. Hoffmann, St. Louis.
65 Patterns of the Spinal Cord Curve of Patients with Pott's Disease Wearing Plaster Jackets. A. Thorndike, Boston.
66 Two Cases of Spondylolisthesis. C. D. Napier, Boston.
67 Desirability of Replacing Congenital Hip Dislocation in Infancy. B. Bartow, Buffalo.
68 Study of the Anatomy of Congenital Dislocation of the Hip After Manipulation Reduction. N. Allison, St. Louis.
69 Congenital Dislocation of the Hip. Stitching the Capsule Around the Reduced Head. E. H. Bradford, Boston.
70 Achillotomy and Fasciotomy in a Patient Seventy-Two Years Old. A. R. Shands, Washington, D. C.
71 Report of the Adult Ward of the Hospital for the Ruptured and Crippled for the First Two Years Ending March 1, 1905. V. P. Gibney, New York.

Iowa Medical Journal, Des Moines.

October.

72 Two Eye Diseases of Children of Interest to the General Practitioner. H. C. Moffett, Clinton, Iowa.
73 Gastric Ulcer. F. E. Walter, Worthington, Minn.
74 Pneumonia: Its Rational Successful Treatment. W. C. Abbott, Chicago.

Virginia Medical Semi-monthly, Richmond.

October 7.

75 Appendiceal Abscess, Pathology and Treatment. S. M. Mason, Clarksburg, W. Va.
76 Appendicitis, when to Operate. J. B. Catlett, Staunton, Va.
77 Mastoiditis. J. G. Parsons, Brookings, S. D.
78 Diagnosis of Pregnancy at Term. G. Baughman, Richmond.
79 Important Changes in the New Pharmacopeia. F. M. Reade, Richmond.
80 Principles of Surgery. S. McGuire, Richmond.
81 Epilepsy. J. W. Selman, Greenfield, Ind.

Texas State Journal of Medicine, Fort Worth.

October.

82 Cure of Leprosy. I. Dyer, New Orleans.
83 Pathogeny of Fever. J. W. McLaughlin, Austin, Texas.
84 X-Ray Treatment of Skin Cancer, Lupus and Keratosis. J. M. Martin, Hillsboro, Texas.
85 Importance and Advantage of Immediate Repair of Lacerations Occurring During Childbirth. J. M. Frazier, Belton, Texas.
86 Repair of Injuries to Birth Canal. M. L. Moody, Greenville, Texas.
87 Observation on the Treatment of Trachoma. T. F. Roberts, Paris, Texas.
88 Treatment of Ectopic Pregnancy. H. K. Leake, Dallas, Texas.
89 Treatment of Exophthalmic Goiter. R. W. Nobles, Temple, Texas.

Northwestern Lancet, Minneapolis.

October 15.

90 Forms and Etiology of Suppurative Processes in the Abdominal Cavity. A. C. Behle, Salt Lake City.
91 Pathology of Suppurative Processes in the Abdomen. J. F. Critchlow, Salt Lake City.
92 Diagnosis of Suppurative Processes in the Abdominal Cavity. E. F. Root, Salt Lake City.
93 Treatment of Suppurative Processes in the Abdominal Cavity. H. D. Niles, Salt Lake City.

Denver Medical Times.

October.

94 Prostatitis. M. H. Sears, Denver.
95 Lead Poisoning by Lead Acetate in Therapeutic Doses. J. R. Arneill, Denver.
96 Normal Obstetrics: Management of the Puerperium. T. M. Burns, Denver.

Journal of South Carolina Medical Association, Charleston.

October 21.

97 Should the Radical Cure of Hernia be Attempted by Median Abdominal Section? R. S. Cathcart, Charleston.
98 Imperative Surgery. A. B. Knowlton, Columbia.
99 Remarks on Appendicitis. T. P. Whaley, Charleston.
100 Remittent Fever. H. L. Shaw, Fountain Inn.
101 Diphtheria. W. J. Chapman, Spartanburg.
102 Diseases of the Accessory Sinuses of the Nose. W. P. Porcher, Charleston.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

October 21.

1 An Address on Sir Thomas Browne. W. Osler.
2 Scientific Research in Medicine. C. F. H. Nuttall.
3 *New Operation for Moderate Short Sight. E. E. Maddox.
4 Treatment of Sleeplessness and Pain. L. Brunton, A. R. Cushny, W. Broadbent, W. H. White, A. Foxwell, and B. Dawson.
5 *Diagnosis of the Varieties of Pleural Effusion. W. Hadley.
6 *Influence of Posture on Adventitious Breath Sounds, with Especial Relation to the Early Diagnosis of Phthisis. W. B. Ransom.
7 Pathology, Diagnosis and Treatment of Various Forms of Meningitis. T. Tooth, T. Horder, W. Osler, and others.
8 *Human and Bovine Tuberculosis. N. Raw.
9 *Employment of Citrate of Soda in the Feeding of the Infant. F. J. Poynton.
10 Diagnosis and Treatment of Degeneration of the Heart Apart from Valvular Disease. J. Dreschfeld.
11 Diagnosis of Gastric Ulcer. B. Dawson.
12 Pathology of Bradycardia. J. Hay.

3. **New Operation for Moderate Myopia.**—Maddox' operation consists in flattening the cornea, first in one meridian and then at right angles. The operation was tried successfully on a young man who was barred from entering the army medical service because of a very slight myopia in one eye. Without anesthesia Maddox first dissected up a conjunctival flap and threw it over the cornea, then introduced a triangular iridectomy knife between the reflected conjunctiva and the sclera, and entered the anterior chamber. The iris prolapsed again and again, especially after enlarging the incision above and below with the probe-pointed knife, which forms the next stage of the operation, for only a very large incision is capable of producing a regular flattening of the cornea. At last the iris was comfortably reposed and the conjunctival sutures inserted so as to exert considerable traction on the flap. Healing was painless and uninterrupted. The second incision was made about three months afterward, the incision being made with an ordinary cataract knife, this time downward, with the same good result as before. The patient succeeded in passing his physical examination, showing that the operation was a success.

5. **Diagnosis of Varieties of Pleural Effusion.**—Hadley calls attention to the means at our disposal for diagnosing the nature of any particular pleural effusion. These are clinical, cultural, by inoculation, by tuberculin, Jousset's microscopic method, cytodiagnosis and serum diagnosis. In conclusion he submits the following suggestions: 1. It is most important to appreciate the frequently tuberculous nature of pleural effusions. 2. Clinically, if an effusion takes place without any apparent cause, either in the shape of trauma, of inflammation from without, or of some definite trouble in the lung, mediastinum, or pericardium, or if there is not heart or kidney disease to account for it, and if there is no strong rheumatic taint, then it is almost surely tuberculous. 3. Pathologically we have several very reliable ways of definitely determining its true nature, the two most reliable as well as convenient, being (a) the estimation of the cell content of the fluid, (b) Jousset's method of demonstrating the presence of tubercle bacilli.

6. **Posture and Adventitious Breath Sounds.**—The point brought out by Ransom is that not only in cases of bronchitis and emphysema, but in a few cases of limited pulmonary tuberculosis, adventitious sounds may be heard in the supine while absent in the erect position.

8. **Human and Bovine Tuberculosis.**—As the result of an observation of 3,500 cases of tuberculosis, with, in addition, a study of 650 autopsies on such cases, Raw expresses the opinion that human and bovine tuberculosis are separate and distinct varieties of disease, but that the human body is susceptible to both, and especially to bovine tuberculosis in the early periods of life. The two diseases are so rarely seen together in the human that there seems to be some ground for presuming that they are antagonistic to each other, and that bovine tuberculosis may possibly confer an immunity against human tuberculosis. Raw believes that primary intestinal tuberculosis, tabes mesenterica, and other tuberculous affections of the serous membrane in children are probably bovine tuberculosis conveyed by milk and are not true human tuberculosis, although the bacillus of Koch is found in them all. He believes also that the bovine bacillus is more virulent for children than the bacillus of human tuberculosis.

9.—See THE JOURNAL, Aug. 13, 1904, page 701.

The Lancet, London.

October 21.

13 *Pathology and Prevention of Secondary Parotitis. R. T. H. Bucknall.
14 *Discrimination of Physiologic Albuminuria from that Caused by Renal Disease. A. E. Wright and G. W. Ross.
15 *Case of Volkmann's Contracture Treated by Shortening the Radius and Ulna. R. P. Rowlands.
16 Popliteal Aneurism in a Boy Cured by Hunter's Operation. E. Owen.
17 *Case of Impaction of a Gallstone in the Large Intestine. S. M. Smith.
18 Case of Leprosy in a European. J. H. P. Graham.
19 One Hundred Administrations Each of Ethyl Chlorid and of Somnoform Alone and in Mixture with Nitrous Oxid. G. W. B. Daniell.
20 Pregnancy Complicated by Chorea Gravidarum and Eclampsia; Recovery. H. U. Gould.

13. **Secondary Parotitis.**—On studying the evidence presented by 6 cases Bucknall concludes that it is highly probable that secondary parotitis is invariably due to an infection of Stenson's duct, dependent on a septic condition of the mouth, and that its onset may be prevented by attention to the following details: 1. The patient's mouth should be carefully cleansed and rendered aseptic before operations and at the commencement of long febrile illnesses. If necessary, causes of nasal obstruction leading to mouth breathing, such as adenoids, should be removed. 2. The anesthetic apparatus should be sterile. 3. The mouth should be periodically cleansed afterward, especially after every attack of vomiting. 4. The bowels should be opened early, and food by the mouth, and especially solid food, should be given as soon as possible. 5. Opium should not be given unless absolutely necessary. 6. The head should not be placed too low nor the binder fixed

too tightly and the dorsal decubitus should be given up as soon as possible. There is also evidence to show that the process of duct infection responsible for ascending parotitis is due to one or other of the following causes: 1. The presence of specific micro-organisms in the buccal cavity, such as the special organisms of mumps, typhoid fever, and probably typhus fever and pneumonia also. 2. An increase in the number or virulence of the normal buccal organisms and especially of the staphylococci. 3. Anything interfering with the quantity or quality of the saliva protectively draining down the duct. Either an actual obstruction, such as a calculus, or an alteration in the saliva secreted, resulting from general ill-health or the administration of drugs may produce this effect.

14. **Physiologic Albuminuria.**—Wright and Ross claim that when it is found that a patient possesses a normal excretory quotient, and that his albuminuria can be abolished by diminishing the hydrostatic pressure on the renal capillaries and by increasing the coagulability of the blood, there is every reason to conclude that the kidney is free from organic disease and that life is no more endangered than it would be if the patient were the subject of urticaria.

15. **Operation for Volkmann's Contracture.**—Rolland describes an operation which he performed on a girl 6 years old for Volkmann's contracture following a fracture of the radius and ulna. The whole left upper limb having been very thoroughly cleaned and compressed on the previous day, an operation was performed a little more than four months after the accident. Anesthesia was produced by ethyl chlorid followed by ether. A tourniquet was applied round the lower third of the arm and an incision was made along the middle third of the radial border of the forearm; the wound was placed slightly in front of the interval between the radial extensors of the wrist and the special extensors of the thumb. The posterior border of the radius can be easily felt in this interval before an incision is made, but a wound over the extensor carpi radialis longior gives a better access to the radius. This tendon and the radial nerve protected by it were drawn forward and the extensor carpi radialis brevoir was retracted in the opposite direction. The radius, having been well cleared of soft parts, was drilled at two points, one and a quarter inches apart, and then a portion of it three-quarters of an inch long was removed by the aid of a small saw. The piece of bone removed extended from the pronator teres insertion to the pronator quadratus; some of the fibers of the former had to be detached from the bone to allow the removal of enough bone. The wound was now covered by a temporary dressing, during the removal of a similar portion of the ulna through a longitudinal incision along its subcutaneous border. Care was taken to divide the ulna an inch higher than the radius so as to prevent cross union by callus. The bone ends were brought together and fixed in apposition by means of fine silver wires, one for each bone. The bones were soft and the wire cut its way out by fissuring the upper ulnar fragment and another hole had to be drilled farther away from the section; this was difficult and it demonstrated the wisdom of drilling the bones before sawing them. The drill holes in the radius had been so directed that when the wire was tightened the lower fragment of the radius rotated into a position of semi-supination. Thus the troublesome fixation of the hand in full pronation was corrected. During the operation it was noticed that the deeper flexors in front of the radius and ulna were firm and fibroid. On removing the tourniquet there was but little bleeding, so the wounds were at once sutured and the limb was enveloped with aseptic dressings and lightly secured in good position on an internal angular splint in order to preserve the semi-prone attitude of the hand. When the operation had been completed, the wrist and fingers could be extended almost, but not quite, into a straight line with the forearm. The splint was long enough to maintain this correction. The operation lasted for forty minutes. After the fourth day passive movements of the fingers were carried out several times daily and the child was encouraged to move the fingers from the first day. When the bones had united, pronation and supination were also practiced diligently and massage also was carefully performed after the ninth day. The child can now use the hand for most things, has a good range of movement in the fingers, a powerful grip, and supination and pronation are very well performed.

17. **Impacted Gallstone in Colon.**—The symptoms in the case reported by Smith did not, at any time, point to gallstone disease. There was some pain across the abdomen in the region of the umbilicus, occasional attacks of hiccough and frequent vomiting. An operation having been decided on, the abdomen was opened in the middle line below the umbilicus. Examination revealed the presence of a mass of adhesions in the region of the gall bladder. A second incision was made through the upper part of the right rectus, and it was found that many bands of adhesions were binding down the transverse colon to the neighborhood of the gall bladder. That part of the colon beyond this point was empty and collapsed. Separation of the adhesions was successful in relieving obstruction. Gauze drains were inserted and the wounds were closed. The patient's condition becoming worse, the colon was again exposed and opened under local anesthesia and a Paul's tube tied in. The patient died shortly afterward. At the autopsy the large intestine was found to be distended as far down as the brim of the pelvis, at which point a gallstone of the size and shape of a hen's egg was found impacted. The transverse colon and the gall bladder were found imbedded in a mass of adhesions and a communication was found between their cavities. The common bile duct was obliterated. Other calculi were found in the gall badder.

Journal of Tropical Medicine, London.

October 16.

21 Treatment of Sprue. D. J. Galloway.
22 Cerebrospinal Fever—Spotted Fever. K. McGahey.
23 Epidemic Infectious Pneumonia, Plague and Influenza in India. G. H. Fink.

Bulletin de l'Académie de Médecine, Paris.

24 (Year LXIX. No. 32.) *Le paludisme en Algérie pendant l'année, 1904. Laveran.

24. **Malaria in Algiers During 1904.**—The French have been masters of Algeria for seventy-four years, but the ravages of malaria recur, in certain seasons, almost as severely as during the first years of their occupancy. About 98,774 cases of malaria were known in 1904, with 7,432 deaths from this cause. The total mortality during the corresponding three months in 1903 was 2,280, while it rose to 9,927 in 1904, mainly due to the recrudescence of malaria. In the French army of 44,065 men, stationed in Algeria, 10,065 cases of malaria were reported, with 47 deaths from this cause. The season was an unusually wet one. The physicians, teachers and public officials in Algeria now have undertaken a campaign of education to teach the people how to avoid malarial infection. It is proposed to introduce the "malaria catechism" used in Corsica. The children there are obliged to learn the answers to a set of questions in regard to malaria, its causes, mode of dissemination and its prophylaxis. Drs. Soulié and Moreau have been instrumental in founding an antimalaria league in Algeria, which is now introducing prophylactic measures on a large scale.

Presse Médicale, Paris.

25 (No. 83, Oct. 14.) Localisation et extraction des projectiles par un procédé basé sur la simple radioscopie. T. Tuffier.
26 Report of IX Congress of Urology, Paris, October 5-7.
27 (No. 84.) *L'hémophilie, Pathogénie et serothérapie. P. E. Weil.
28 *La langue auxiliare, L'Esperanto (artificial, auxiliary language). G. Vitoux.

27. **Effectual Serum Treatment of Hemophilia.**—Weil presents some views in regard to hemophilia which explain its nature and suggest effectual treatment. His experience has demonstrated to his satisfaction that the lack of coagulation in the blood of hemophilics is not due to the presence of an anticoagulating body. It is the result of the absence or modification of certain substances normally in the blood, such as the coagulating ferment, the fibrin ferment or the thrombase. If traces of these ferments from normal serum are added to a specimen of hemophilic blood, coagulation proceeds as under normal conditions. Hemophilic serum added to normal blood does not affect its coagulation. On the other hand, normal serum added to hemophilic blood causes normal coagulation in the latter. Animal serums have the same action in this respect as human serum, but less intense. In a typical case of

hemophilia with excessive, protracted hemorrhages after slight traumatisms, never spontaneous, intravenous injection of beef serum had a remarkable effect in inducing coagulation in the blood drawn from the finger or elbow. Before the injections blood from a vein in the elbow showed no signs of coagulation until after 25 to 75 minutes, but after intravenous injection of 15 c.c. of beef serum blood from the finger coagulated in 3 minutes, and that from the elbow in from 5 to 10. A week later 10 c.c. of human blood were injected, and by the fifth day coagulation was almost immediate. The interval before coagulation gradually lengthened until in two weeks it was from 20 to 55 minutes. Another intravenous injection of 15 c.c. of beef serum reduced the interval again to less than 8 minutes. This serum treatment or vaccination of the hemophilic blood is only passive. The curative action of the injected serum becomes evident in 48 hours and continues marked for about a week, when it gradually subsides. This passive vaccination is similar to that observed by Widal in his preventive serum treatment of paroxysmal hemoglobinuria. Too large doses produce the opposite effect. Weil concludes by recommending this method of serum treatment, or rather opotherapy, as a preventive measure in case an operation is contemplated on a hemophilic. In the case described the patient had a tooth pulled after an intravenous injection of the foreign serum, and, for the first time in his life, the traumatism of the operation was not followed by excessive and prolonged hemorrhage. His gums did not bleed any more than is usually observed in normal individuals.

28. **International Language: Esperanto.**—THE JOURNAL recently referred to an international congress where all spoke the same language, although 1,500 members had gathered from all parts of the civilized world. This artificial, auxiliary language was invented by a Polish physician, Dr. Zamenhof of Warsaw, in 1887, and Vitoux claims that it is a masterpiece of simplicity and clearness. The dictionary contains only the root words, the thirty affixes that modify them being applied with mathematical exactness to define the sense. The plan of the language is readily understood and three or four months of practice are sufficient to master it. Hachette of Paris publishes, in Esperanto, the *Internacia Scienca Rivuo*, and it is announced that a medical journal, published exclusively in Esperanto, will soon be founded.

Centralblatt f. Chirurgie.

Last indexed page 1452.

39 (XXXII, No. 37.) Improved Technic for Roentgen Control of Corrected Hip-Joint Luxations.—Die Ermöglichung einer genauen Kontrolle reponierter kongenitaler Hüftgelenksluxationen. R. Klapp.

Centralblatt f. Gynäkologie, Leipsic.

Last indexed page 1283.

40 (XXIX, No. 37.) *Pyonephrose, Pyelitis und Harnleiter-Kompression während der Gravidität. A. Sippel.
42 Zur Technik der Sterilisierung der Frau (of women). M. Kirchhoff.
43 Ein neues Instrument zur Ventrifixation des Uterus. J. Rudolph.

40. **Pyonephritis, Pyelitis and Compression of Ureter.**—A woman of 33, in the sixth month of her first pregnancy, was attacked suddenly with violent pains in the left side of the back, and fever. The urine showed no marked changes, but other signs indicated a tumor in the kidney region, and the operation revealed pyonephrosis. The cause was assumed to have been compression of the left ureter by the gravid uterus, and the patient was ordered to lie exclusively on the right side. Recovery was prompt and the pregnancy continued undisturbed to term. Sippel ascribes greater importance to compression of the ureter than is generally accepted nowadays. Abrupt compression might induce troubles leading even to eclampsia, without permanent enlargement of the ureter sufficient to attract attention at the autopsy. Systematic reclining on the sound side, supplemented with the usual measures, will frequently avert or banish disturbance from this compression pyelitis. If all fails, then the uterus should be emptied. Compression of the ureter should be suspected when fever and sudden pain develop during a pregnancy. In some cases, appendicitis has been diagnosed, but the appendix region was found sound at the operation and the disturbances persisted until expulsion of the fetus, when they subsided. The compression may interfere with the circulation into and out of the kidney, and relief may be obtained by decapsulation, as Edebohls has reported in a case of eclampsia.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

44 (XXXI, No. 38, September, 21.) *Die praktische Durchführung des Ueber-Druckverfahrens (technic of over-pressure anesthesia). L. Brauer.
45 *Kleine Hilfsmittel bei der Untersuchung von Gehirnkranken (examination of patients with brain affections). H. Liepmann.
46 Ueber einen Fall von Poliomyelitis anterior acuta mit oculopupillären Symptomen. A. Clopatt.
47 *Ueber Colitis mucosa (Enteritis membranacea) und Colica mucosa. H. Elsner.
48 *Ueber den Zickzackschnitt bei der Appendicitis operation (zigzag incision). Riedel.
49 *Ueber Hodengangrän bei Gonorrhoe (gangrene of testicle). A. Buschke.
50 *Ueber Bolusverbandstoffe (dressings of fuller's earth). Aufrecht.

44. **Improved Technic for Over-pressure Anesthesia.**—The head of the patient is enclosed in an air-tight glass box, to which compressed air is supplied. The arms of the anesthetist are inserted into the box through openings, with an air-tight rubber cuff fitting around the wrist. There are also additional openings for the arms of an assistant. The illustration gives a view of the combination of the compressed-air apparatus, with the chloroform-oxygen apparatus which supplies mixed chloroform and oxygen for the anesthesia. Both apparatus have been simplified and improved. The introduction of a bellows tank provides a reservoir for the compressed air. A manometer shows the varying pressure, while the register of a second manometer shows the constant pressure in the box in which the patient breathes. There is also a glass bell, in which hangs a rubber bag, in direct communication with the breathing box; this bag is subjected inside and outside to the same pressure as the patient's lungs.

45. **Minor Aids to Examination of Patients Presenting Brain Troubles.**—Among the minor points to which Liepmann calls attention is the danger of incorrectly diagnosing apraxia in cases of paralysis from a focus in the cortex. This is especially liable to occur when there is simultaneous aphasia. In examining such a patient, one is liable to accept mental impairment from the lack of the proper response. This error can be avoided by systematically seeking for some group of muscles which is not affected. The patient may be able to respond correctly with the muscles of the leg or face when the failure to respond correctly with the hand might be interpreted as due to inability to understand the orders given. Another means is by asking a nonsensical question, such as "Has an eagle wings? Has a horse wings?" the expression of the patient's face answering the question as plainly as words. To determine hemianopia, he strews some beans on the table, without the patient noticing it, and then asks him to pick them up. If he picks them all up, not much is learned, but if he overlooks all on his left side a defect on that side is more than probable. Another point is that persons unable to read words are yet sometimes capable of reading figures. Another good test for mind blindness is to have the patient pick up grains of different sizes strewn on a table. The smallest size perceived is an indication of the visual capacity. Congenital may be differentiated from acquired color blindness by the lack of hesitation in sorting out articles of different colors. In testing cases of perseveration, only the first response in each series of tests can be regarded as demonstrative. He gives a number of means to test apraxia, and lays special stress on the natural actions of the patient, how he combs and brushes his hair, takes up a glass of water to drink when he is thirsty or greets a friend—the information thus derived is more important than that obtained when the patient performs the same actions on command.

47. **Membranous Enteritis.**—Elsner's article issues from Boas' clinic. He believes that colitis mucosa and colica mucosa are neuroses affecting the secretion of mucus. They are generally accompanied by other nervous symptoms, and the patients usually notice that the pains and evacuation of mucus follow psychic excitement. The secretion of mucus may be subject to nervous influences in other organs, as we witness in membranous dysmenorrhea and in croupous bronchitis. This nervous hypersecretion generally develops on the basis of some catarrhal intestinal affection. He describes the postmortem findings in 2 cases and reviews what has been published on the

subject, affirming, in conclusion, that there are no grounds for the assumption that membranous enteritis is a special affection *sui generis*.

48. **Zigzag Incision in Appendicitis.**—Riedel's motto now is: "Operate on a patient with appendicitis as soon as you see him." He protests against the term "early operation" and claims that it should be called the "proper operation." The tumor should not be directly cut into, and for this reason he prefers what he calls the zigzag incision. He has had a mortality of 7 per cent. in 357 cases, and states that 19 out of the 21 deaths might have been prevented if the patient had applied to a physician earlier.

49. **Gangrene of Testicle After Gonorrhea.**—Buschke knows of only 17 cases of gangrene of the testicle after gonorrhea. In the case personally observed, the gonorrhea was mild, but the inflammation in the testicle progressed to gangrene. The patient was a robust man of 27. A bacillus resembling the colon bacillus was cultivated from the secretions, and Buschke believes that the gangrene was a secondary process. Gonococci have not been found in the gangrene to date. Trauma seems to afford a predisposition.

50. **Dressings of Fuller's Earth.**—Aufrecht is enthusiastic in regard to the advantages of fuller's earth as a dressing for wounds. It is slightly astringent, sucks up the secretions and prevents putrefaction, all qualities of the ideal dressing. The best way in which to use it is with gauze impregnated with it; the gauze is first treated with an ammoniacal soap, with or without a small proportion of salicylic acid or aluminum acetate. The absorbing power of gauze thus impregnated with fuller's earth is three times that of ordinary gauze, while its antiseptic properties, he claims, are superior to those of iodoform.

Deutsche Zeitschrift f. Chirurgie, Leipsic.

Last indexed page 1528.

51 (LXXVII, Nos. 4-6.) Zur Frage der Choledochotomie. A. Brüning.
52 Zur Kenntnis der congenitalen Sacral-Tumoren. K. Frank.
53 Ueber eine besondere Form der Infraction: die Faltung der Knochen-Corticalis. H. Kohl.
54 Zur Lehre von osteoplastischem Carcinom. M. Matsuoka.
55 *Ueber Nerven-Regeneration nach Extraction von Nerven wegen Trigeminus-Neuralgie. G. Perthes.
56 Die operative Behandlung der Perityphlitis. R. Michaelis (Trendelenburg's clinic, Leipsic).
57 *Fractures of Pelvis.—Die Beckenbrüche mit Bemerkungen über Harnröhren- und Harnblasen-Zerreissungen. P. Stolper.
58 "Zwei Dünndarmschlingen" in eingeklemmten Bruch (2 loops in incarcerated hernia). C. Lauenstein.
59 Pressure Stasis and Hemorrhages.—Ueber Stauungsblutungen durch Rumpf-Compression (traumatische Stauungsblutungen). P. Sick.
60 Suture of Left Ventricle for Bullet Wound.—Schuss durch die linke Herzkammer. Herznaht. Tod durch Peritonitis. R. Rothfuchs.
61 Successful Resection of 118 Inches of Ileum.—Resektion von 3 m. Ileum wegen Volvulus und innerer Einklemmung. R. Göbell (Kiel).

55. **Regeneration of Nerves.**—Perthes describes the particulars of a case of recurring trigeminal neuralgia in which five different operations for its relief had been done. The patient finally succumbed to the progress of a valvular defect, and the autopsy revealed regeneration of the nerves where the Gasserian ganglion had been extirpated, and also after the various resections and other operations on the nerves involved. In a second case the neuralgia recurred after a Thiersch operation on the nerve, but was abolished again by removal of the regenerated nerve. Experiments on dogs are reported which show that regeneration of a nerve was almost certain to occur after a few months, when it was merely resected, while the mere severing of the nerve, with the interposition of a gold filling between the ends of the stumps in the infraorbital canal, prevented regeneration. The experimental results observed promise good results in man from the use of a dentist's filling to plug the canal in the bone after severing or extracting the inferior infraorbital or alveolar nerve.

57. **Fractures of Pelvis.**—Stolper's collection of fractured pelves now numbers 33, while the clinical cases observed bring the total to 64. He is convinced that many fractures of the pelvis are not recognized, and describes the points useful in diagnosis. It is difficult and sometimes impossible to diagnose a concomitant rupture of the bladder; consequently all dubious cases should be sent at once to a surgical hospital. Exploratory laparotomy is more than justified, and fine results were attained in the 50 cases on record in which a ruptured bladder received operative treatment. Stolper's article fills nearly 100 pages, and presents the subject from every point of view, with special reference to injuries of the urethra and bladder.

Mitteilungen a. d. Grenzgebieten, Jena.

Last indexed page 1285.

62 (XV, Nos. 1-2.) *Ueber einen grossen, intraduralen Tumor des Cervikal-Markes, der mit Erfolg exstirpiert wurde (successful removal of large tumor of spinal cord). S. Auerbach and Brodnitz.
63 *Ueber Gefrierpunktsbestimmungen des Blutes und seröser Körperflüssigkeiten (cryoscopy). T. Cohn.
64 *Welche Aussichten bestehen für eine Früh-Diagnose der Intestinal-Carcinome (prospects of early diagnosis)? I. Boas.
65 Artificial Hyperleucocytosis to Enhance Resisting Powers, and Study of Action of Subcutaneous Injections of Yeast Nucleic Acid in this Respect.—Künstliche Hyperleukocytose als Mittel zur Erhöhung der Widerstandskraft des Körpers gegen operative Infektionen. Renner.
66 Peptisches Geschwür nach Gastroenterostomie mit Bildung von Magen-Colon und Colon-Jejunum-Fisteln; vollständiger Verschluss der Gastroenteroanastomose (peptic ulcer with fistulas and closure of gastroenteroanastomosis). J. Kaufmann (New York).
67 *Zur Kenntnis der Osteogenesis imperfecta congenita und tarda (sogen. idiopathische Osteopsathyrosis). E. Looser.
68 *Guajacol zur Behandlung der Nieren-Tuberkulose (of kidneys). Max Schüller.

62. **Successful Removal of Spinal Tumor.**—The patient was a robust young woman, previously healthy, who suddenly experienced violent pains in the back of the neck and in the right arm. Symptoms of right radial paralysis developed with other indications of compression of the cervical spinal cord. Tentative antisyphilitic treatment produced no effect and the affection continued a gradually progressive course. In pachymeningitis, the radial domain is generally spared, while the trouble is usually bilateral and several roots are involved. The absence of vasomotor or trophic symptoms in this case spoke against syringomyelia. Differentiation from caries was more difficult, as some of the symptoms suggested it, also the predominance of motor over sensory disturbances, the comparatively rapid involvement of the other side (after six months), and the rigid way in which the head was held. Arguments against caries were found in the lack of any indications of tuberculosis or of a tendency to a hump or to protrusion of the rear wall of the throat, and also the normal temperature during the eight weeks of observation. Roentgen findings were negative. Abrupt pressure of the head in the direction of the spine did not cause the violent pain common to spondylitis, and extension gave no relief. As the highest muscles unmistakably affected with atrophy were the supraspinal, the upper edge of the tumor was supposed to reach the fourth cervical segment at least, possibly also the third and second. This was suggested by the zones of hyperesthesia which reached to the edge of the hair at the back and in front almost to the margin of the lower jaw. In this region the patient also located her most violent pains, although they sometimes extended into the back of the head and to the temples and brow. She also complained of pains in the left middle intercostal spaces, but these were disregarded in the diagnosis. It was assumed that the tumor probably extended downward to the eighth cervical segment, on account of the participation of the smaller muscles of the hand and the eye symptoms. Engravings of the tumor are given in natural size and colors. It was 6.5 cm. long by 1.5 to 2.25 cm. wide and 1 cm. thick, of rather solid consistency. It surrounded the spinal cord like a mantle, and its upper portion lay for 2.5 cm. beneath the atlas and axis. It was only lightly adherent to the arachnoid, and it slipped out from beneath the unopened atlas on gentle traction. Its removal was followed by a gush of blood-stained fluid, but this was soon arrested by lowering the head of the table and tamponing. The tampon was removed in a few minutes, and it was seen that the flattened spinal cord had resumed its cylindrical shape. Seven catgut stitches were taken in the dural sac, and a strip of gauze brought out through the wound which was sutured with catgut in tiers. No symptoms on the part of pulse or respiration were observed during the ablation of the tumor. The patient rapidly recovered, the paralysis and atrophy promptly subsiding; the muscles first affected regained function first. The eye symptoms, however, persisted unmodified. The incision extended from the atlas to the first dorsal vertebra, and the spine was carefully dissected free from the soft parts. When this had

been done, the patient suddenly stopped breathing and the pulse became imperceptible, but both were restored by two minutes of artificial respiration. On account of the necessary manipulations for this, the asepsis of the field was dubious, and consequently the soft parts were held back with a roll of gauze on each side and the skin was sutured over them. Three days later the operation was continued and the removal of the tumor then proved an easy task. Among the conclusions drawn from this experience is the refutation of the assumption that intradural tumors are necessarily small. Also that the injury from the tumor is liable to be felt more seriously in the part of the spinal cord opposite to the tumor than in the part directly contiguous to it. The patient in the present case recovered so completely that her right arm is now stronger than the left, notwithstanding its long paralysis. The operation was undertaken about eleven months after the first symptoms of trouble had been noted. Operating in two sittings was possibly one of the main factors in the success obtained.

63. **Cryoscopy of Blood and Serous Fluids.**—This article by Cohn contains the bibliography of the subject, in addition to extensive personal research. He found the freezing point of normal blood between —0.517 and —0.562 C. He noted that it was frequently abnormally low in chronic nephritis and generally so in uremia and leukemia. In febrile affections it was abnormally high. Contrary to what is observed in animals, inflammatory fluids in the pleura, peritoneum, spinal cord or brain are not isotonic with the blood serum in man. He was unable to find any particular molecular concentration of the blood characteristic for any special kind of nephritis.

64. **Prospects for Early Diagnosis of Intestinal Cancer.**—Boas analyzes his experience and comes to the conclusion that the prospects for early diagnosis of cancer in the intestines and its successful removal are not very promising. The really incipient stage of intestinal cancer is beyond our powers to detect. Early application to a physician and early diagnosis do not guarantee the possibility of its radical removal in all cases, and not even in the majority of gastrointestinal cancers. He cites a number of instances to show further that good results are possible even when the symptoms have long existed. The kind and the malignancy of the tumor are the deciding factors, not the promptness with which the affection is diagnosed after the first symptoms appear. Our very earliest diagnosis, as a rule, is too late. Metastases or ascites are found even in the apparently very earliest stages in a large proportion of cases. He does not believe that gastroscopy will ever acquire much importance, as the very first subjective symptoms are generally found accompanied by advanced objective changes in the majority of cases of intestinal or stomach cancer, even in case of cancers of the rectum which are more accessible than others. Much might be accomplished by better training of physicians in the diagnosis of cancer, and Boas here reiterates his plea for the establishment of cancer-examining stations for suspicious cases. This would reduce the number of investigated but incorrectly diagnosed cases of rectal cancer, and also of cancer of the colon. The latter have a better prognosis than cancer elsewhere in the gastrointestinal tract. The malignancy of cancer, he thinks, lies not only in the neoplasm itself, but in the insidious latency of its development.

67. **Idiopathic Osteopsathyrosis.**—Looser reports the results of examination of the amputated leg of a patient with typical congenital imperfect and tardy bone formation. It has convinced him that the condition is a clinically and anatomically well-defined affection, as he relates in detail.

68. **Guaiacol in Treatment of Tuberculosis of the Kidneys.**—Schüller describes two cases of tuberculosis of the kidneys in which he realized a complete cure by internal and local application of guaiacol for months. His first patient was a man of 40, with evidences of apical tuberculosis, bacilli in sputa, bilateral tuberculous processes in the testicles and tubercle bacilli and kidney epithelial cells and red corpuscles in the urine. The process in the testicles healed completely after seven injections of a guaiacol-iodoform-glycerin preparation, combined with internal administration of guaiacol for several months. The drug was then suspended for a few months, and then resumed for a few weeks, by which time no further evidences of tuberculosis in any organ could be detected. The patient has been definitely cured, now for more than thirteen years. Schüller's second patient was a little girl with a tuberculous process in the hip joint and evidences of a tuberculous affection of the kidneys. Guaiacol topically and internally was followed by the cure of the hip process and the subsidence of all symptoms on the part of the urinary apparatus, without recurrence during the nine years since. He consequently suggests the advisability of guaiacol treatment in the incipient stages of tuberculosis of the kidneys and bladder, also after removal of one kidney to protect its mate, and, further, in the cases in which a partial operation has been done on the kidney, in order to hasten and to promote the permanent recovery of the organ. Some of his patients have taken guaiacol for more than four years without inconveniences. He gave it in 200 cases of tuberculosis between 1891 and 1899, and 37 of the patients were materially improved or quite cured by it. The kidneys are especially adapted for this mode of treatment, as part of the guaiacol is eliminated through these organs. His practice is to give it in small fractional doses continually. His dose for adults is from 12 to 15 or even 20 drops of pure guaiacol in from 130 to 150 or 200 gm. of water, shaken until dissolved, and fractioned into five or six portions. Children take from 3 to 23 drops, according to age. No preparation of guaiacol has proved so effectual in his experience as the pure article.

Münchener med. Wochenschrift, Munich.

69 (LII, No. 38.) *Ueber periarteritis nodosa. M. Verse.
70 *Zum Kapitel der Nasendiphtherie (Nasendiphtheroid bei Scharlach). A. Uffenheimer.
71 *Ueber Pathologie und Therapie der Kieferhöhleneiterungen maxillary sinusitis). A. Strubell.
72 Ueber "Ichthyosis circumscripta der Areola mammæ." H. Friolet.
73 *Ueber Cytorrhyctes luis Siegel. R. Freund.
74 Neue Operations-Methode bei Lid-Defekten und -Ektropium durch freie Plastik aus der Ohrmuschel (from ear muscle). Elter and Haass.
75 Ueber einen einfachen Ersatz des elektrischen Vierzellenbades (simple substitute for electric "4-cell bath"). H. Winternitz.
76 Zur Kenntnis der tiefliegenden para-artikulären Lipome. H Mohr.
77 Kalium-Permanganat als billiges lokales Hamostaticum. H. Vörner.
78 Typhusbazillus und bacillus fæcalis alcaligenes. H. Conradi.
79 Medical Training, etc., in Japan.—Aerztliches vom japanischen Kriegsschauplatz. v. Pezold.
80 Das Kugelpessar (ball pessary). Scheumann.
81 *Zur Behandlung gynäkologischer Erkrankungen durch Thiosinamin. Offergeld.

69. **Periarteritis Nodosa.**—Versé has been able to find only 20 cases of this affection in the literature. Men between 20 and 35 were principally affected, but the disease has been observed in an infant under 3 months and in one man of 52. The course is always more or less acute, terminating fatally in three or four months. He describes the history and findings in a typical case personally observed. Signs of old nephritis were found and a peculiar affection of the smaller arteries in the liver, mesentery, intestine, stomach and spermatic cord, characterized by the formation of small spindle-shaped or round aneurisms, with thrombosis of the vessels affected. In 5 of the published cases syphilitic antecedents were certain, and Schmorl has reported one in which the multiple lesions entirely retrogressed under antisyphilitic treatment. At the autopsy years later, the vessels were found normal, but in the liver, kidneys and heart traces of the old affection could be detected in the form of minute fibrous foci closely related to the vessels. Periarteritis nodosa may thus be regarded as a special form of syphilis of the blood vessels.

70. **Nasal Diphtheria with Scarlet Fever.**—Uffenheimer describes a fatal case of what appeared to be diphtheria affecting the nose during the last stages of scarlet fever. He argues that it was not true diphtheria and that the membrane formation was exclusively the work of the scarlet fever infection. He calls the condition nose diphtheroid, with scarlet fever. A very few non-virulent diphtheria bacilli were found in the midst of countless numbers of streptococci.

71. **Treatment of Suppuration in Maxillary Sinus.**—Strubell takes two maxims as his guide: To rinse only so long as the patient tolerates it without objecting, and to reject all radical measures which leave a permanent communication between the mouth and the sinus. He describes his methods and technic in detail.

73. **Cytorrhyctes Luis.**—Freund regards it as very remarkable that the announcement of the discovery of spirochetes in syphilis has attracted such widespread attention, while Siegel's announcement in regard to the finding of the *Cytorrhyctes luis*, at about the same time, has passed almost unnoticed. Freund has confirmed Siegel's findings in nearly a dozen cases of syphilis, and has succeeded in inoculating animals with the cytorrhyctes. He found them in enormous numbers in his cases, corresponding to from 3,000 to 5,000 in a single drop of blood or 60,000,000 in a liter of blood. The extreme contagiousness of syphilis can be explained only by assuming that the causal germs are present in every drop of blood. Siegel's bodies are flagellates, and the blood corpuscles near them sometimes rock a little as if set in motion by the action of the flagella. The stains that show the spirochetes are the best ones for the cytorrhyctes also, but they can be seen equally well without staining. Siegel's illustrated description appeared in the *Münch. med. Wochft.* for July 11, No. 28, 1905.

81. **Treatment of Gynecologic Affections with Thiosinamin.**—Offergeld gave thiosinamin a thorough trial in 55 cases of various gynecologic affections, but found that it failed to display any power to reduce infiltrations or to soften adhesions or contractures. No benefit whatever was realized in any instance that was not amply explained by the concomitant measures.

Hospitalstidende, Copenhagen.

Last indexed page 1370.

82 (XLVIII, Nos. 28-29.) *Den hyperacide Mavesaft og dens Bestemmelse ved det Sahliske Provemaaltid (hyperacidity and Sahli test meal). V. Rubow.
83 Tilfaelde af kongenit Syfilis med Paavisning af Spirochæte pallida i Lever og Milt (in liver and spleen). A. Bronnum.
84 (Nos. 30-31.) Om Neuro fibril-farvning og Neuro-fibrillernes Forhold i Cortex cerebri ved patologiske Tilstande (staining and behavior of neurofibrils). A. Wimmer.
85 *Om Administrering af Eter-Narkosen. C. Struckmann.
86 (No. 32.) *Om Behandling af tuberkulos Peritonitis. C. A. Dethlefsen.

82. **Hyperacidity and Sahli Test Meal.**—Rubow reviews the experiences during the last five years with 704 patients presenting dyspeptic disturbances treated in Faber's service at Copenhagen. Hyperacidity, after an Ewald-Boas test meal, was found in 213. The details of these cases with acidity of 75 or over are given in tabulated form. None showed a total acidity above 125. He thinks that this shows the rarity of actual hyperacidity, as all the cases are explainable by simple hypersecretion. The proportion of hydrochloric acid averaged .44 per cent. Only in three instances did it reach .45 and .46 per cent. Trials of the Sahli test meal gave conflicting findings, even in healthy subjects. He thinks that one source of error is in the rising of the butter to the top of the "flour soup" used for the test. It does not form a homogeneous emulsion.

85. **Ether Anesthesia.**—Struckmann argues that a combination of morphin and ether insures an almost ideal anesthesia without by-effects. He uses the Sudeck mask and a dropper for the ether, and emphasizes the remarkable absence of salivation and secretion when from 1 to 1.5 eg. of morphin was injected one hour before the ether. All his surgical patients during the last six months were anesthetized in this way, and the results far surpassed those observed with any other mode of anesthesia. There was no stage of excitement, and the pulse, respiration and color of the face remained normal throughout. He is convinced that this form of anesthesia avoids all the dangers of other technic, and is far more convenient for both the surgeon and the patient.

86. **Tuberculous Peritonitis.**—Dethlefsen relates the history of a girl of 7 with typical tuberculosis of the peritoneum cured by a median laparotomy. Another case was that of a married woman of 40, with other indications of tuberculosis, accompanying those of typical tuberculous peritonitis. The peritoneal process was arrested by a median laparotomy, and the ascites never returned, but the patient succumbed a year or two later to the progress of her lung affection.

Hygiea, Stockholm.

Last indexed page 666.

87 (LXVII, No. 7, July.) *Till fragen om antidifteriserums dosering. H. Suber.
88 *Post-operative X-Ray Treatment of Cancer.—Om efterbehandlung af opererade maligna svulster med Röntgenbestralning. T. Sjogren.
89 Beidrag till den operativa behandlingen af den Dupuytren'ska finger-kontrakturen. G. Bäärnhielm.
90 "Den Laennecska" cirrhosen. A. Stromstedt.
91 (No. 8.) Determination of Human Blood in Suspicious Spots.—Om pavisandet af människoblod i misstänkta fläckar.—E. Aspelin.
92 *Oxidizing Ferment in Infants' Stools.—Nagra ord om et oxiderande Ferment sasom en anledning till uppträdandet af grönfärgade öppningar inom dibarnsaldern. W. Wernstedt.

87. **Dosage of Antidiphtheria Serum.**—Suber tabulates statistics from various countries to sustain his assumption that antidiphtheritic serum should be given in large doses (5,000 to 15,000 units) in the severer cases of diphtheria, irrespective of age. The moderately severe cases can be treated with moderate doses (3,000 to 4,000 units). Intravenous injection in the extremely severe cases has a prompt and certain curative action, without serious by-effects, even when colossal doses are used. He claims that the published statistics show that insufficient doses have been given in many instances. Injection of large doses of the serum also proves effective even against diphtheritic paralysis. He rejoices that the price of the serum has recently been reduced in Sweden, and urges that all the local boards of health and hospitals should be provided with the serum for preventive injections at need, free of cost.

88. **Postoperative Treatment of Cancer with X-Rays.**—Sjögren is now making a practice of *x*-ray exposure after ablation of a cancer in all cases. He has thus treated 10 patients with mammary cancer and 2 with sarcoma, allowing an interval of from one to three months after the extirpation before he commenced the Roentgen exposures. More than six months have elapsed since the sarcoma operations, and there has been no trace of recurrence in any instance. The first case was a sarcoma in the kidney of a girl of 5, and the other a sarcoma originating in the soft parts of the hip in a woman of 21. He thinks that systematic postoperative *x*-ray treatment, to forestall recurrence, is a most promising field.

92. **Oxidizing Ferment as Cause of Green Stools of Infants.**—Wernstedt calls attention to the fact that green stools are distinguished not only by their color, but by the presence of considerable mucus. He thinks it is due to the action of a substance which he has isolated from such stools, and regards as a ferment. It oxidizes guaiacol in presence of hydrogen dioxid, but the reaction does not occur if the stool is first heated to boiling point. The oxidation causes a brownish discoloration which is most marked in the flakes of mucus and is not diffuse. The substance is contained in the mucus and apparently has an oxidizing action on bilirubin. Green stools do not necessarily imply dyspepsia, he says, but may be observed in starving infants and occasionally in those apparently otherwise healthy.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

OFFICIAL LIST of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service of the United States, also List of U. S. Marine Hospitals, Quarantine Stations, and Quarantine Vessels, July, 1905. Paper. Pp. 30. Washington: Government Printing Office, 1905.

MANUAL OF PATHOLOGY, Including Bacteriology, the Technic of Postmortems, and Methods of Pathologic Research. By. W. M. L. Coplin, M.D. Fourth Edition. 495 Illustrations, some in colors. Cloth. Pp. 994. Price, $4.00 net. Philadelphia: P. Blakiston's Son & Co., 1905.

MEDICAL REGISTER OF PRINCE EDWARD ISLAND. Printed and Published under the direction of the Medical Council in conjunction with the Prince Edward Island Medical Act. Paper. Pp. 19. Charlottetown: Registration Office.

TECHNIQUE DU TRAITEMENT DE LA LUXATION CONGENITALE DE LA HANCHE, by Dr. F. Calot. Avec 206 figures dans le Texte, et 5 Planches. Paper. Pp. 293. Paris: Libraires De L'Académie de Médecine, 1905.

OPERATIVE SURGERY. For Students and Practitioners. By J. J. McGrath, M.D. Second Edition. 265 Illustrations, some in colors. Cloth. Pp. 628. Price, $4.50. Philadelphia: F. A. Davis & Co., 1906.

MEMORANDA ON POISONS. By T. H. Tanner, M.D., F.L.S., Tenth Revised Edition. By H. Leffmann, A.M., M.D. Cloth. Pp. 177. Price, 75c. Philadelphia: P. Blakiston's Son & Co., 1905.

ORIGIN AND TREATMENT OF STAMMERING. By G. A. Lewis. Seventh Edition, Enlarged and Revised. Cloth. Pp. 202. Detroit, Michigan: George Andrew Lewis.